# The Money Issue:

This is going to be a little rough, because I’ve never taught this stuff before, and there is a lot I am still learning and much I don’t know. But, I’m inspired to get you all actively thinking about money stuff if you are not already doing so. There is a lot of good advice out there, and a lot of bull\*\*\*t and learning how to tell the difference can be hard.

I’m going to do this in a form of a worksheet which I will post on Moodle, with links to information that I think is helpful. I’m also going to gear this towards professional who are just starting off (that is, you guys!). But understand that is harder for me because I’m significantly older. Here and there I’ll offer some of my own advice or tips, but the most important thing you learn with this is to *research the hell out of any major financial decision* (I’ll say this a lot). So, don’t take action based on just one person’s advice, no matter how much you trust or admire him or her. Go online – there are a lot of well-intentioned voices out there that want to help you with good advice.

Here are the topics I’ll address – most arose in our sharing session at the start of the term. I’ll start with the simple and build up from there.

* Your money strategy
* Budgeting
* Student loans
* Taxes
* Investing and Saving

# First, some suggested strategy:

* **Make time to consider your long term financial goals.** The long-term goals will help you determine what you need to be doing right now. Is your goal to retire at 65? How much money per year will you need? How much will you want? Do you want just enough to get by, or do you want to have money to travel? Did you think about increased costs of health care as you age? Do you want financial independence as soon as you possibly can so you can quit your job if you hate it and look for another job? Or do you want to gain financial independence and retire early? Do you want kids. They are not cheap! Maybe you want to roam the world for a few years after college, living frugally and earning income in the gig economy. **Bottom line**: **if you don’t know your long-term goals, then you can’t craft a strategy to reach them.** If you don’t have those goals yet, don’t panic. There’s a lot to consider. The important thing is to get started imagining different futures for yourself and considering what you want to pursue. But don’t every feel like you are trapped, because you can change your goals at pretty much any time.
* **Once you know your long term goals, you can begin building a plan to reach them**. This will involve thinking on time scales that you are probably not used to. Where do you need to be financially in 5 years? 10 years? 25 years? For example, if you plan to go to grad school, how important is it that you go to a school that will pay you to teach so that you can pay your way through without accumulating debt? Or, if you are going into medicine, how important is it that you go to a top medical school (which is super expensive) versus a solidly-good state school?

# Budgeting:

* **Build your budget based on your near- and long-term goals.**
* If you are disciplined enough to earn a BS in biology, then you are disciplined enough to craft and stick to a budget.
* **There is power in frugality**. Avoid being shackled by debt by keeping your spending budget as low as possible. The more you save, the faster you can build wealth, or the more money you have for the fun and important things you need to pay for.
* **Know your vulnerabilities**. If you are prone to shopping sprees with a credit card, then you need to seriously consider switching to using a debit card and check/cash only transactions. Credit card debt is criminally expensive, with interest rates in the double-digits. Don’t fall into the trap that credit card company set for you. Spend within your limits.
* **Bargain shopping pays**. Shop at thrift stores and low-price grocery stores. Find low-cost substitutes if you have expensive tastes. Do your own cooking – way cheaper than buying meals (and healthier!).
* **Minimize your transportation needs** by living close to where you work and where you shop. Cars are a money pit –the gas, the monthly payments, the maintenance and repair, the wear and tear and depreciation, the insurance. Avoid cars or use them as little as possible. Many gen Y and Gen Z don’t even have a driver’s license. The Walking, biking, or taking public transportation to work. Rent a car or use ride-share when you need.
* **Research and learn**: There are lots of websites that can coach you on how to find bargains, make the most out of the money you have, and lifehacks for saving money.
* **Be creative**. Why buy drinking glasses when a used jelly-jar will do just fine? Re-use the ziplock bags that food comes in. Tutor your neighbor’s kid in science or math once a week in trade for use of their wi-fi!
* **Resources**:
  + Lifehacker: "Tips, tricks, and downloads for getting things done." <https://lifehacker.com/>
  + Mr. Money Mustache: <https://www.mrmoneymustache.com/> A blog. “Mr Money Mustache is a thirtysomething\* retiree who now writes about how we can all live a frugal yet Badass life of leisure.”
  + Run a Google search for “Frugal Living” – there are dozens of good websites with tips on stretching your dollar.

# Student Loans

* Many of you have student loans, and many of you are looking to take out more loans to pay for the next schooling.
* **Understand how loans work**. If you don’t already, spend some time on this. Banks make their money on the interest. So, pay particular attention to how loan repayment is structured so that your early payments are all interest, and not the principle (the amount that you borrowed). This means that the earlier you pay off your principle, the more money you save.
* **Taking on new loans.** Build a lifestyle that minimizes your expenses so that you can take the smallest loan possible. Your investment in your education will pay off a lot sooner if you minimize your debt. Read the fine-print about the loans to make sure that you can use them wisely. For example, will you be allowed to consolidate them? Is the interest rate floating (avoid at all costs!) or fixed? Are you penalized for paying them off early?
* **Repaying existing loans**. Many of you can defer making student loan payments until you are out of school. Some of you may qualify for loan deferment based on what jobs you go into. In a few professions, your federal student loans will be forgiven if you qualify. It’s worth looking into.
* **I’ve got extra cash** – **should I pay down my student loan or invest**? We’ll get to investments later but suffice it to say that this is an important question, and you should check out the benefits of either strategy. To get started, see the link below from Student Loan Hero.
* **Resources**:
  + Use this interest calculator to figure out how much you pay in interest on your loan: <https://investinganswers.com/calculators/loan/loan-interest-calculator-how-much-interest-will-i-pay-my-lender-3191>
  + The College Investor: Advice on managing your student loans: <https://thecollegeinvestor.com/>
  + Federal webpage describing all about deferment and forbearance: <https://studentaid.ed.gov/sa/repay-loans/deferment-forbearance>
  + Should I pay down my student loan or invest? <https://studentloanhero.com/calculators/student-loan-payoff-vs-invest-calculator/>

# Taxes:

* **You can do this – avoid paying for services you don’t need**. If you are bright enough to earn a BS in biology, you can do your own taxes. At this stage in life, your taxes are probably relatively simple, and there are lots of helpful websites to guide you through the process. If you want a crutch, then buy tax software(e.g., TurboTax) or use one of the many free programs made available (see link below). Beware the upgrades, however, if you have complicated taxes, you’ll probably have to pay for a program upgrade. Finally, if you make a simple mistake on your forms, the IRS sends you a letter explaining what happened and how to correct it. That’s what happens. No big deal. And, you are very unlikely to get audited (where they investigate you for fraud) unless and until you have a lot of money or are filing in ways that suggest fraud or criminal activity. So don’t sweat these earlier years paying taxes. Just do your best.
* **Resources**:
  + Website comparing free tax software, and the pros and cons of each. <https://thecollegeinvestor.com/23914/turbotax-alternatives/>

# Saving and Investing:

* For most of you, the idea of having enough money to save or invest may seem out of reach right now. But very soon, you will be employed and the day will come when you have some extra cash. What should you do? Blow it on fun stuff? Pay down student or other loans (see above)? Leave it in a checking or savings account? Or invest it in stocks and/or bonds?
* **Use your money to make more money**. If you invest your money carefully, you can earn more money, either by investing it in stocks and bonds, where your investment grows in value over time, OR, by paying down the principal on loans so you pay less interest to your lender. That said, spending your extra cash on a vacation or something fun can be a real morale booster every once in a while!
* **Financial independence (FI).** This is having enough money invested and saved that you are no longer dependent on your job or other forms of income. Retirement should be at time when you are financially independent. In short, it is accumulating enough wealth that your money (via investments) does your work for you. Some seek FI so they can retire early. Some enjoy the sense of financial security and empowerment it brings. FI is related to F.U. money, which is having enough money saved so that if you need, you can walk away from your job and be okay. For example, you quit your job, then are unemployed for a bit while you find another job. Financial independence can mean also that you have enough money set aside to weather a personal financial emergency of some sort.
* **Retirement** – **seriously, I’m 21, why should I care?** The answer to this is the magic of compounded interest. Use this calculator [here](http://www.moneychimp.com/calculator/compound_interest_calculator.htm) to see how your money can grow. You invest a little bit now, and it becomes a lot more, later. Saving enough for retirement isn’t easy, especially in midlife which can include kids, maybe a home mortgage (loan), aging parents that may need you to care for them, or possibly even a period of under- or unemployment. The sooner you start, the happier and more secure you will be.
* **Investing – what is it?** People invest money for their retirement, or as a place to put money to grow while they are not using it.What is typically meant by investment is buying stocks or bonds. Stocks are buying a small piece of ownership in a company, and as the value of the company fluctuates, so does your piece of it. This may seen risky, and it is to an extent. But if you take the long view and look at what the stock market has done over history, it has just gone up. Check out this graphic [here](http://www.summitofcoin.com/blog/6/14/2017/why-does-the-stock-market-go-up-over-time) that shows this.
* **What stocks to buy?** Don’t worry about that. You don’t have to select particular stocks. There are packages of stocks that selected by companies and these packages are designed to track the stock market as a whole, or a particular sector of the market such as information technology. These are known as index funds. Perhaps the best advice out there is to invest in low-cost index funds that will track the market. Invest the money, and then ignore it. Let it grow with the market. Don’t freak out when there are market corrections (where lots of stocks drop in value at once), leave that money in the fund. In fact, when the market crashes is a good time to invest, because you can buy more shares with your money because each share is worth less at that moment.
* **Beware of the broker**: Brokers help people invest. But they charge a lot.
* **What are bonds?** Bonds are investments that will pay you back a set amount that is scheduled in advance. Typically these are loans to a government, and the government is a very reliable in paying back people. Bonds are more stable investment, which is nice, but the drawback is that they typically earn less interest than investments in a stock market over long periods of time. There are many reasons why people or institutions invest a lot in bonds because of their stability. E.g., people close to retirement don’t want to have the markets crash and take away their investments right at or after they retire.
* **Stock market and bonds VS savings accounts:** A bank savings account is a very safe place to stash some money, and keeping some tucked away there is a good idea. It’s a lot faster to access in an emergency than money invested in stocks or bonds. And it is a lot more secure than keeping cash in your checking account. Downside is that the interest the bank pays you for your money in the savings account is very small, usually less than 2% per year. So, you may want to keep some funds there to maintain emergency money and money for flexibility, but otherwise consider investments that will grow your money faster.
* **What is FIRE, and why should I care?** FIRE stands for financial independence, retire early. It’s a growing movement in gen X and Y. You can find lots of blogs and articles about people doing this. Some are able to retire in their 30s. There’s lots of strategies to get there, such as living in an area, or country, where the cost of living is lower so that more of your earnings can go into retirement investment. BUT, the reason I bring this to your attention is that the FIRE community online has tons of suggestions for spending and investing wisely to make the most out of your dollars.
* **Resources:**
  + Blog on Investing. JL Collins: <https://jlcollinsnh.com/>. Blog with a major focus on money, including managing finances, planning for retirement, and building wealth. See especially a blog post he wrote about/to his daughter with 9 basic habits and strategies to build wealth and independence. <https://jlcollinsnh.com/2011/06/08/how-i-failed-my-daughter-and-a-simple-path-to-wealth/>
  + The White Coat Investor: <https://www.whitecoatinvestor.com/about/> A blog written by a self-taught ER physician that has morphed into a major go-to website for doctors. While the content is tailored to doctors (read: high income professionals that sacrificed about 8-10 years of earnings (while in school and residency) and took on a lot of debt along the way and have very little time to manage their laundry, let alone their money), the website has lots of good info for anyone who wants to learn about investing.
  + Vanguard. This is an investment company that unlike typical brokerage firms, makes its fund low-cost and available to individual investors. Typically when you go through a company, called a brokerage, to help guide you to buying stocks, that company charges you money for their service. That charge often eats away at your earnings, taking away up to several percentage points per year. If that money had stayed in the market, invested, over time it would be the equivalent of a lot. Vanguard does brokerage services, but it offers low-cost funds to investors.
  + Financial Samuari – another highly recommended website on managing your money. <https://www.financialsamurai.com/>
  + The Motley Fool: <https://www.fool.com/>. “The Motley Fool is dedicated to helping the world invest — better. Founded in 1993 by brothers Tom and David Gardner, The Motley Fool helps millions of people attain financial freedom through our website, podcasts, books, newspaper column, radio show, mutual funds, and premium investing services.”