Comprehensive Career Plan

1. Summary of Goals and Objectives

TECHNICAL AREA
I would like to work as a physician in a private practice as well as working on regenerative medicine or cell-targeting medicine. I would like to become a physician as I love the doctor patient interaction and would love to be able to make such a tangible difference in people’s lives. I also would like to work on research within regenerative medicine or cell-targeting medicine because I find both of them to be extremely interesting topics and they both possess so much potential to radically change the lives of countless people.

I would like to work in a private practice as it gives you more freedom to make decisions based off of what you believe will be best for your patient, instead of sometimes being restricted by policy. I’m not entirely sure who I would be working for in terms of regenerative medicine or cell-targeting medicine research, but I personally know of several doctors who are doing research in a topic that interests them, as well as practicing as a physician, so I know it’s definitely a possibility.

GENERAL LIFE GOALS AND OBJECTIVE
I want to graduate from ASU with an undergraduate degree in biomedical engineering, get a masters in biomedical engineering, and receive an MD. I want to have a career that I feel fulfilled in, which I believe will be a career in which I get to apply technical knowledge to help people and make their lives better. I hope that as I go through life, I learn how to live in the present instead of constantly being concerned about the future or looking back with regrets. I want to be able to make enough money to be able to support both myself and my parents as due to different circumstances in our life, they had to make several monetary sacrifices to do what they believed was best for my brother and I. I want to one day get married and have kids and have the chance to watch them grow. I want to be able to work part time while they’re still at home and after they go to college, I would like to start working full time again.

2. Current Goals

EDUCATION
Some of the coursework I have completed thus far are Calculus 3, Differential Equations, Organic Chemistry, Physics 3, Conservation Principles, Fluid Mechanics, Numerical Methods, and Anatomy and Physiology 2. I don’t feel like I currently have enough coursework to work on technical projects that interest me on my own, however, I am currently working in a lab where I’m learning skills that I believe will be important for me. However, I think that Conservation Principles does provide me with some basis as to how products such as medicine can be produced on a mass scale. I also believe that anatomy and physiology has given me at least a surface level understanding of the human body and how interconnected it all is, which I believe is important to understand for all the topics I’m interested in pursuing research in. I think I’m currently missing a lot of cellular classes such as biochemistry, cellular biology, and immunology, which I am planning on taking several of this coming semester. I’m really looking forward to all of the classes mentioned above, particularly immunology as we did a module on immunology in anatomy and physiology, and I found it absolutely fascinating. I’m also very excited to take biomaterials because I’m very interested in learning more about the properties of different materials and how those
materials can interact with the human body. Taking these classes will allow me to gain a basis of the technical skills necessary to begin researching topics I’m interested in such as regenerative medicine or cell-targeting medicine.

**PROFESSIONAL PREPARATION**

I currently have an updated resume and cover letter, as a result of this class. I think I tend to be a good writer and am okay at giving presentations, although sometimes I get very nervous. To improve at this, I plan to be more prepared for presentations, so I can feel more confident and less nervous going into it. My critical thinking skills I would say are average for an engineering student, but I have found that the amount of sleep I get greatly affects how well I am able to critically think. As a result, I will make sure that I am getting enough sleep every night in order to critically think well. I think I tend to be pretty good at listening to others, career planning, and general planning. In order to improve my career planning skills though, I will continue to research potential careers and continue to talk to others further down that career path than myself. I don’t currently really have any professional mentors, but I do have some great mentors in my personal life. I tend to do well both with working independently and working in teams. How well I can read and understand technical material tends to depend on how strong of a background I have in that subject. To improve upon this, I will continue to read journal articles on topics I don’t understand but we talk about in lab meetings. I like to make sure that I truly am learning whatever content we’re covering in my classes and have typically been able to do this just by paying attention in lectures and doing homework. However, I have been finding myself getting easily distracted in classes recently. In order to prevent this from happening, I’m going to start putting my phone into my backpack during class time and take notes in a notebook instead of my computer if possible. I tend to be able to communicate and explain ideas to others relatively well, as I used to be a math and science tutor at the community college. I tend to be able to apply what I’ve learned in my math, science, and engineering classes relatively well to real-world problems. I am not very good at decision making as I’m an indecisive person and never want to feel like I’m closing a door on an opportunity. In order to become a more decisive person, I’m going to practice making decisions on my own, instead of asking everyone else for their opinion, especially on smaller matters. I’m also not the best with dealing with uncertainty as I like to plan everything out and know exactly what’s going to happen. However, I do think this is something that I have been improving on, and will continue to work on, as I’ve slowly become more accepting of the unknown. How well I lead a group I have found is directly correlated to how confident I feel in the subject matter or in that situation. In order to improve myself as a leader, I will continue to work on building confidence in myself and my leadership.

**PERSONAL LIFE**

I would say I currently have a pretty good social life. I tend to spend most of my free time with my boyfriend, and we like to study together or eat lunch together when we can. I don’t tend to see my other friends too much outside of classes though, which is something I want to improve upon. I intend to make more time for my other friends and be intention about making plans with them throughout the school. However, I find this hard to do sometimes as I don’t have much free time, and when I do I like to spend it with my boyfriend.
**ECONOMIC STATUS**
I’m currently financially stable. Due to my academic scholarship, this scholarship, and financial aid, I have not incurred any debts thus far and should be able to graduate with my undergraduate degree debt free. Additionally, I’m hoping to become a paid research assistant in a lab or participating in FURI.

3. Education

**IMPORTANCE OF EDUCATION**
Education is important to me because I genuinely really enjoy learning about absolutely everything that I can and because I know that it’s vital to the careers I’m interested in. Although tests and homework can be stressful at times, I overall really enjoy school. I love learning about new technologies, learning technical skills, and creating friendships with peers.

**EDUCATIONAL GOALS**
I want to get a master’s in biomedical engineering as well as a medical degree.

**PLANNED COURSEWORK**
I’m not entirely sure what classes I’m planning to take yet as the biomedical engineering major map was restructured and I have the option to stay on the old major map or change to the new one, which would give me an emphasis in either biomedical devices or biological devices. I’m also in Barrett, so I may take additional honors classes or do honors contracts in order to fulfill the honors requirements. I’m also a part of the Grand Challenge Scholars program which requires me to take two classes or participate in two experiences for each competency. These competencies are interdisciplinary, research, service learning, entrepreneurship, and multicultural awareness. I believe that taking these additional classes, beyond the ones required for my major, will help me to be a better engineer and doctor.

**INCLUDE SUMMER PLANS**
My main goal for this summer is to study for and take the MCAT. However, during this time I plan to continue volunteering in the research lab I’m currently in, or potentially being a part of FURI. Another potential opportunity I’m looking into for this summer is getting a biomedical engineering internship that is about half of summer. Additionally, I’m planning on shadowing and volunteering at a hospital.

**EDUCATIONAL OPPORTUNITIES**
I am planning on applying for the Mayo Clinic- Barrett, the Honors College Premedical Scholars Program, GCSP research stipend, and potentially scholarships for a travel abroad. In a larger sense, I am also planning on applying to the 4+1 program at ASU as well as medical school at several institutions. I don’t know too much about additional scholarships or fellowships I can apply for however, it is something that I will be sure to look into.
4. Research Experience

RESEARCH GOALS
I’m currently volunteering at a research lab here at ASU where I am working on protein purification, which is being used for testing lateral flow assays to detect cervical cancer. The protein purification process is relatively long as it takes about a week to make and purify a set of that particular protein. By purifying different kinds of protein, they can be used in the lateral flow assay to see if one protein binds to the antibodies better or not. I’m also interested in working on a more biomedical engineering related project, but I’m not entirely sure what area I’m most interested in yet. By the time I graduate from ASU I hope to have at least one paper with my name on it published as well as presented at at least two conferences.

RESEARCH/PROJECT OPPORTUNITIES TO BE PURSUED
I’m interested in participating in FURI, EPICS, and potentially an REU. I’m not entirely sure what I would be interested in researching but potentially something with STEM cell research, neurodegenerative disease, or prosthetics that are controlled by the brain. I’m interested in researching any of these topics as they are all topics I think are super interesting and would make a huge impact on the lives of countless people.

IMPORTANT DEADLINES
The deadline for Spring 2019 FURI Applications is October 11th at noon. The application for FURI includes a two page research proposal, a bibliography, a timeline of your project, the budget for your project, a personal statement, your resume, unofficial transcript, and a FURI faculty member proposal support letter. Although this does not require a letter of recommendation, you will need to have a faculty member who is willing to approval your FURI proposal. As EPICS is a class that you enroll in, there is not application for it and you must be enrolled by the day classes start, which is January 7th, 2019. Applications for an REU over the summer is due by March 6th. To apply, you must submit an application, your unofficial transcript, and a letter of recommendation from a faculty member. I do have at least one recommender in mind to use and I have started building a relationship with her. However, I think it’s important for me to continue building a relationship with her by going to office hours and talking with her in class.

INCLUDE SUMMER PLANS
My main goal for this summer is to study for and take the MCAT. However, during this time I plan to continue volunteering in the research lab I’m currently in, or potentially being a part of FURI or another research experience, either at ASU or an external lab such as Mayo Clinic or The University of Arizona College of Medicine.
5. Industrial/Work Experience

**IMPORTANCE OF INDUSTRIAL/WORK EXPERIENCE**

I honestly haven’t thought extensively about the importance of industrial experience as I’ve been more focused on what I need to be accepted to medical school. However, I think it is very important to gain industrial or work experience as it allows you to gain the skills that companies are looking for within your area of interest. Additionally, it gives you a glimpse into what working in that field would be like which is crucial to determining how interested you are in working in that field.

**PRIOR INDUSTRIAL/WORK EXPERIENCE**

I have not had any industrial work experience within engineering thus far.

**DESIRED INDUSTRIAL/WORK EXPERIENCE**

I would like to gain industrial work experience within a biomedical or genetically based company such as Medtronic, TGen, Gore, or Stryker.

**INTERNSHIPS TO BE PURSUED**

I would love to get an internship at Medtronic, TGen, Gore, or Stryker. I find each of their companies to be extremely interesting and would love to gain the real-life experience of what working for any of them would be like as I think it might help me decide what I’m interested in pursuing within biomedical engineering.

**INCLUDE SUMMER PLANS**

My main goal for this summer is to study for and take the MCAT. However, I would love if I could get a biomedical engineering internship that is about half of summer as it would allow me to gain the real-life experience of what working as a biomedical engineer is like, while also giving me adequate time to study and do well on the MCAT.

6. Community Service

**IMPORTANCE OF COMMUNITY SERVICE**

Community service is important to me as it gives me the opportunity to give back to others, as I know I am extremely blessed to have the life that I do. I think it can help in your career as potential employers like to see that you care about others and in some cases community service can lead to a leadership opportunity. Additionally, working within the community allows you to change your perspective and perhaps help you better understand what products people really need and what could drastically improve their lives.
PRIOR COMMUNITY SERVICE

When I was in high school my friends and I started a MATHCOUNTS club for homeschools in which we taught them various math concepts and at the end of the year they got to compete at the MATHCOUNTS competition. I am also currently a Fulton Ambassador in which I give perspective engineering students a tour of ASU and share my experience at ASU. This allows me to impact perspective engineering students at ASU and give them a student’s perspective of what being an engineering student at ASU is like. Being a part of this has helped me improve my public speaking skills. I am also currently a part of Project Sunshine in which I go to Phoenix Children’s Hospital to play games and do crafts with the children there. In Project Sunshine I get to impact the kids at the hospital by brightening their day and hopefully helping them forget about why they’re there and instead just focusing on having fun. Being a part of this has allowed me to interact with patients, which influenced my decision to become a doctor, as well as serve as a reminder that doctors’ and engineers’ jobs truly have such a large impact on countless lives. I like to participate in these activities as I really enjoy each of them and it changes my perspective from being so focused on myself to how I can help others.

FUTURE COMMUNITY SERVICE

A community service opportunity I’m interested in is being a clinical volunteer at SHOW, a student run clinic that is open over the weekend to treat vulnerable populations, such as the homeless. I would like to do this as it will give me clinical volunteering experience as well as help them run their clinic more smoothly to ensure that the homeless can receive optimal treatment for free.

PROFESSIONAL ORGANIZATIONS

I’m a part of the Biomedical Engineering Society (BMES) as well as the Society of Women Engineers (SWE). I’m not currently planning on joining any other organizations as it’s already sometimes difficult for me to make it to their meetings.

LEADERSHIP SKILLS

I’m planning on starting a chapter of Engineering World Health at ASU this year, which will allow me to build leadership skills by leading and organizing the club. Additionally, I have been regularly attending some club meetings this year that I believe could lead to potential leadership opportunities next year. By the time I graduate college I hope to have held at least two leadership positions for at least a year because I believe being a leader is a critical skill that companies are looking for.

IMPORTANCE OF MENTORING

Being mentored is important to me as I believe that mentors have so much valuable wisdom that they have to share with others and can help guide you to not make the same mistakes they did or have seen others make. I would like to have a mentor to help guide me in creating my career path and what I’m involved in or to mentor me in projects such as FURI. I think this would be most helpful to me as I now know what I want career wise but I’m not sure how to get there. I would like to hear about why they
chose the path they did and what skills they think are most helpful to various engineering jobs. My plan to gain suitable mentoring is through professors in classes and the professors I work under in the research lab I’m in. One of my professors this semester I’ve been taking to as she originally wanted to go to medical school but ended up getting her PhD in biomedical engineering instead. I found it really interesting to hear about her work, what she researched, and the pros and cons of working within research. I also know there are mentors that are available to us through this program and have identified a few that I will reach out to.

**Economic and Financial Goals**

In 5 years I hope to be in medical school, at which point I will be incurring debt to pay for tuition and living expenses. In 10-15 years I hope to have graduated from medical school, be completely debt free and earn enough money to support myself and my family. I also hope to be making enough money that I would be able to regularly donate to nonprofit organizations as well as invest in real estate. I believe that becoming a doctor would support these financial goals.

**IMPORTANCE OF GRADUATE SCHOOL**

I hope to be accepted into medical school but if that doesn’t work out then I plan to get a Masters or possibly a PhD. Graduate school is important to me as I know there are many more opportunities for jobs if you have a higher degree, in addition to getting paid more. If I’m not accepted into medical school straight out of undergrad, I plan to finish the 4+1 program and apply again the following year. My current GPA is just below what is required for the 4+1 program but after this semester it should be high enough to meet the GPA requirement.

**PREPARATION PLANS**

I would plan to go to graduate school full-time. I would more than likely have to use student loans to pay for graduate school, but I am also planning on applying for as many scholarships as I can. I am planning to study this summer for the MCAT and make that my number one priority in order to make sure I do well on it as it is one of the most critical components of a medical school application. I plan to study for it by using self-study books as well as by using resources provided for free through the partnership ASU has with Princeton. I am working on developing relationships with my professors in order to have strong letters of recommendation, and am already working on my personal statement.

**MS THESIS AND COMMITTEE**

If I ended up getting a Masters, I would want to do a MS thesis because I’m currently in a research lab and I really enjoy it! I’m really not sure what my thesis topic would be yet but possibly something relating to stem cell research because I think this has so much potential and find the topic really interesting. I have not thought about who would serve as my MS thesis supervisor or thesis committee. I have not thought about how to start planning for this as right now my goal is really to go to medical school, so that’s what I’ve been focused on.
PhD IN ENGINEERING, TOPIC, THESIS, COMMITTEE

I have thought about pursuing a PhD in engineering if I don’t go to medical school because from everything I’ve seen that’s who’s conducting all of the truly groundbreaking research and it would open the opportunity of becoming a professor at a university. Once again, I think my research topic would be something within stem cell research due to the potential it has. I have not thought about who would serve as my PhD thesis supervisor or PhD thesis committee. I have not thought about how to start planning for this as right now my goal is really to go to medical school, so that’s what I’ve been focused on. I have considered a direct PhD but I don’t think this is something I will more than likely do unless I decide I don’t want to go to medical school as completing a masters within the 4+1 program would be an extra year, which would allow me to reapply to medical school the following year instead of something more long term like a PhD.

JOB DESCRIPTION

If I become a physician, my specific job description would depend upon which specialty I would peruse. However, as of right now I think I would like to have a specifically within primary care, possibly pediatrics or family medicine. Regardless of the specialty, my job would consist of diagnosing and treating illnesses as well as routine wellness checks. From my understanding, the flexibility of this would depend upon the specialty as well as if I was within private practice or a hospital. However, overall I think I could have relatively flexible hours. The resources available to me once again would more than likely depend upon if I was in private practice or within a hospital as there would be more resources available within a hospital setting. Being a physician would not provide me with the opportunity to work from home but would come with great benefits. The most obvious of these benefits would perhaps be a high salary, but I believe this would also provide me with a stronger understanding of what devices could be most useful to patient care.

STARTING YOUR OWN COMPANY

Starting my own company is something that has somewhat interested me as both my parents have owned their own company and my dad is currently still self-employed. However, as a result I’ve also seen the struggles of starting and running your own company so I’m not sure if it’s something I would want to pursue or not. I really don’t know much about the more business end of starting a company such as forming a LLC, creating a business plan, or securing intellectual property.

PROFESSIONAL DEVELOPMENT PLAN

In undergrad I’m planning on graduating with a degree in biomedical engineering, completing my Barrett thesis and graduating with Honors, participating in FURI for two semesters, being a published research author, presenting at conferences, and completing at least two engineering internships with companies such as Medtronic, Gore, or Stryker. In the long term, I plan to graduate from medical school, and work as a doctor while possibly doing some biomedical research or working with biomedical engineers to help them better understand what medical inventions could be groundbreaking to medicine.
PERSONAL DEVELOPMENT PLAN

I want to continue working on my communication and interpersonal skills. I also want to continue to learn and improve upon work life balance. In addition, I want to become more involved in volunteering for organizations that I truly believe in the work of, such as my church.

NUTURING SPECIFIC SKILLS AND/OR HOBBIES

I would like to become more competent in coding in C++ and Arduino, as I think these will both be imperative skills in the future within any field. I would love to continue dance, specifically ballet, and it’s my dream to one day be on pointe. I also would love to learn how to play guitar and piano better as well as various crafting skills such as soap making, knitting, or crocheting.

FUTURE EDUCATION PLANS

My dream is to attend medical school at Mayo Clinic in Arizona, within pediatrics or family medicine.

Family Planning

Thus far, I have met most of my friends through classes or clubs and met my current boyfriend in a robotics team we were both on in high school. In a partner, I look for someone who is Christian, honest, and giving of their time. It’s also important to me that they see the value in education and have goals that they are pursuing and passionate about. I would like to get married later on, more than likely during or after medical school. I would like to have kids, and possibly adopt a child. In order to make important decisions I hope that we would both be able to explain to one another our opinions as well as truly listen to what the other has to say. I think that at some points we may have to make decisions that will benefit one of our careers more than the other’s, but I hope that these types of decisions would be based off of what we believe will be best for our family in the long run.

IMPORTANCE OF TRAVELING

I’ve never really had the opportunity to travel much this far due to financial reasons, but it is something that I have always wanted to do! I would love to travel in order to experience other cultures and I think it would change and shape my perspective on the world. The country I want to travel the most to would be Taiwan, as that’s where my mom is from but I’ve never had the opportunity to visit it. In high school, I took Mandarin and absolutely fell in love with what I learned about the culture and architecture there. I would love to do this potentially over summer and winter break with my family. I would also love to travel to Europe, Japan, and Australia with either friends or my significant other perhaps over breaks or after we graduate college/medical school. At this point in my life I don’t really see myself living overseas as all my family is here and although I would love to travel and see the world, I would miss my family and friends here so much. However, perhaps at some point in my life, I’ll become a part of an organization such as Doctors Without Borders to help third world nations.
**Investment Plans**

I plan on taking a portion of my money each month to invest in rental real estate. I also plan to save 10% of the money I earn each year in a 401k for retirement. In order to become more informed about investing and retirement, I plan on hiring a financial advisor and conducting research on my own in order to understand what options may work best for me at that time in my life.

**Contingency Plans**

If I’m not accepted into medical school than I intend to get a masters in engineering and work as a biomedical engineer, hopefully within research and development.

**Philosophy of Life**

To me the most important thing in life is God and people and this is what I base my life around. I want to live a life that is pleasing to God and help others in any way that I can in order to contribute to society in a positive way. In my career I want to be able to improve or brighten someone else’s life. My family and friendships are also extremely important to me as I am a very extroverted person and I can’t imagine myself being happy without them. During bad or uncertain times, I trust that God has a plan for my life, that He knows what he’s doing, and I try to surround myself with my family and friends.

**Other Issues**

I think the above career plan is very thorough.

**References**

FURI Application:  
https://furi.engineering.asu.edu/apply-to-furi/

4+1 Program:  
https://sbhse.engineering.asu.edu/msinfo/

Pre Health Resources:  
https://barretthonors.asu.edu/academics/enhance-your-academic-experience/pre-health-resources