

### **BIS: Life Sciences, Art, Asian and Middle Eastern Studies**

Every human being on this earth has a body that exists as to their origin of identity, whether or not it is biologically what a person feels most comfortable within themselves. This functions as a source for one person's curiosity and by using their surroundings to better understand themselves, which results in a variety of different explanations in attempting to answer that question. Two seemingly unrelated subjects such as art and science can share a common site of convergence as a way of trying to explain the human body. I always had a curiosity about how I can interact with the world I'm living and growing up in with an immigrant family, we were taught to think creatively despite the limited finances we had. Naturally, my interest in art expanded as a result. Throughout my life, I experimented with various accessible art forms ranging from drawing to sculpting, as I enjoyed expressing the human body abstractly in ways that are not limited to the grounds of reality.

Exposure to science classes captivated my interest in the body in a manner linearly with logic and evidence, particularly in chemistry and biology. Labs are a key element that is fascinating as I can have hands-on experience that is reminiscent of artistic practices where the consequent objective results in the synthesis of a product. The study of the bodily functions and processes beneath the outer appearance of humans in combination with lab experience sparked my interest in taking the knowledge that I have learned and pursuing it further in applying it through a career in medicine, specifically in pharmacy.

However, the viewpoint surrounding medicine in relation to the Vietnamese/Asian culture that I grew up with, has a vastly different approach in juxtaposition to Western culture's medicine

of which I had assimilated to while learning in school. It made me cognizant of how growing up in a majority white community with Western ideology and customs affected the way I interrelated with my Asian heritage. This thought stayed on my mind for thereon after.

Entering into the University of Minnesota, finding a major that combined my interests was difficult and resulted in me majoring in Biology, Society, and Environment to follow my career goals and put away my interests in art and Asian culture. It wasn't until I took an Intro to Drawing and Beginning Korean classes that I realized that these passions of mine are key aspects in my life that I want to pursue as well as my academic and career goals. Owing to the BIS program, I can encapsulate my interests. Through Life Sciences, Art, and Asian and Middle Eastern Studies, I will have a diverse understanding and gain the necessary necessities to become an aspiring pharmacist that help others through medication in hopes of developing new drugs using creative thinking and problem solving, and be understanding of people's cultures and their viewpoints to help them from their perspective. While being able to have opportunities to explore different areas of art that would widen my artistic capabilities and learning about primarily Asian cultures that I previously wasn't allowed the opportunity to.

### **Life Sciences**

With an interest in the field of work relating to pharmacy and medicine, it is imperative to have a robust knowledge on the fundamental life sciences that are centered around the study of living organisms, ranging from a variety of different fields of sciences to have the best scenario for health and benefit for human beings.

*CHEM 2302 Organic Chemistry II* is a course that is a branch of chemistry that expanded on my understanding of the various structures, reactions, reagents, and reaction

conditions in the synthesis of organic compounds. The knowledge gained from the course gave me a better understanding of the multiple pathways of which organic compounds can be synthesized and how the properties can affect other compounds within the body (isomers, chirality, etc.). The importance of organic chemistry in pharmacy is remarkable as practically all drugs and medication are synthesized using chemicals and organic compounds. **CHEM 2311 Organic Lab** takes the concepts and reactions learned previously in Organic Chemistry I and II and is applied using laboratory techniques. It provides some insight into what possible lab work may look like in developing and synthesizing safe and effective organic compounds for drugs and medicine. Including, the precautions that are taken to ensure the safety of the people using possible harmful reagents and disposing of waste in an environmentally friendly way as possible.

**BIOC 3021 Biochemistry** is the blending of biology and chemistry to discuss the composition and role macromolecules have within living organisms. Having a solid background in biochemistry is a necessity relating to pharmacy, due to metabolism and metabolic pathways play a key role in how drugs and medicine function through the body. Compatible receptors are needed for it to work properly and knowing the different proteins, enzymes, etc. involved, is important in making sure the person being prescribed would have the least amount of negative side effects in consuming the medication.

**GCD 3022 Genetics** deals with topics on the genetic makeup of heredity and the impact that has for the next generations. It is crucial to have an understanding of genes due to peoples' bodies' response to drugs greatly varies from person to person and because of their genes. Interconnected to biochemistry, how someone's body metabolism works vary that as well can influence what are the most appropriate medications/drugs suited for a patient.

***PHSL 3051 Human Physiology*** is the study of how the organ systems function within the body and the processes and regulations that are taking place. A basic understanding of physiology is crucial in pharmacy as drugs and medications are aimed towards helping bring the human body back into a balance for it to be at a more manageable and stable state. Having an inadequate amount of knowledge will result in the prescribed person to possibly face consequences to their health and well-being.

***ANAT 3601 Principles of Human Anatomy*** discusses the anatomical connections of the human body and the functions of associated structures in relation to the body. Through the ***ANAT 3602 Principles of Human Anatomy Lab***, the topics found in the lecture are applied through a lab setting that provides an opportunity for a hands-on learning experience. Through these courses, I was able to be knowledgeable in anatomical terms, positions, and formations that give me the ability to be able to understand the functionality of the human body structures superficially and internally. It proves to be applicable in the development and/or prescribing of drugs as I can identify an anatomical structure and be able to formulate it to aid a certain function.

## **Art**

Having knowledge and skills in the sciences is sufficient enough in the practice of health and medicine as a way to understand the human body. Through a different perspective in the creative thinking process in art, when joined forces alongside the sciences, can be an effective strategy in interpreting the physical body. Not only will this benefit scientific thinking and skill, but it will also fulfill my personal goal in expanding my artistic abilities.

*Arts 3110 Intermediate Drawing* takes the concepts and lessons learned in the beginning drawing class to use that skill set to expand upon in the approach in finding one's specialty and/or style. Previously, what I have attained through the beginning drawing class, greatly improved my technical drawing skills (shading, line work, etc.) but also my observational skills as I translated what I see in reality with a three-dimensional object onto paper. Through *Intermediate Drawing*, it allowed me to use my skills and be able to abstract ideas and reality through experimental methods. I was able to experience a transformation in my work by adding dimension in abstracting the space that the 2D art inhabits that is otherwise constricted to the plane of the paper. By incorporating drawing techniques with crafting cutout pop-up paper pieces, I was able to present the artwork to be experienced in a new light.

*ARTS 3140 Figure Drawing* is a course that is structured around the drawing, portrayal, and observation of the human body. An evident course that is the amalgamation of the sciences with art into contemporary practice in interpreting the body. Combining my background knowledge of human anatomy with my artistic skills in this class provides an opportunity in incorporating my anatomical knowledge into the exploration of my art.

*ARTS 3780 Super 8 and 16 MM Filmmaking* explores the filmmaking processing and techniques of Super 8 and 16 mm, the historical context, mechanics, and usage in our present time. Having experience in predominantly the 2D fine art forms, taking this course will supply an opportunity in broadening my artistic abilities in an art form I had no background regarding or relating to film. Being able to process our films and learning how that method works, also incorporates science background on how the artistic process can be achieved.

### **Asian and Middle Eastern Studies**

Growing up in an Asian family, and later having to associate with Western culture and learning spawned a visible dissociation with my Asian heritage (accustoming to Western culture and ideals, living in majority-white towns, losing my fluency in speaking Vietnamese, etc.). Nevertheless, it wasn't until I was attending the University of Minnesota that provided me an opportunity in taking courses to understand more of Asia and its distinct cultures. Through studying the media, literature, language, and cultures from Asia and the Middle East in diverse fields, I am capable of reconnecting back with my Asian heritage and applying that knowledge in understanding others (concerning pharmacy).

*AMES 3001 Concepts in Asian and Middle Eastern Studies* serve as an introduction in the questioning of themes related to modern Asia and the Middle East through close investigation through various historical materials, media, texts, and theories. It is important to critically analyze these concepts to see how it shaped the world's view on Asia and the Middle East and aspects of what a country and/or nation is. With a focus such as on nationalism, individuals will have a different interpretation of finding how it affects the world and what it is defined as. Ultimately, trying to find meaning on such complex subject matter with convoluted influences from history in attempting to understand our world, an aspect I will use to understand mine.

*KOR 3021 Intermediate Korean I* and *KOR 3022 Intermediate Korean II* takes the basics in the Korean language learned from the beginning Korean in using short sentences and expands upon that to engage in full conversations with others using complex sentence and grammar structure. These topics of conversation range from conversing at a restaurant to order food to buying clothes at a department store. This class greatly improved my Korean skills and helped provide an insight into the context and functionality of how it is used in the Korean culture; such as addressing someone older than yourself and using the correct formal grammar

(not using 반말) to show them respect. Learning the language is not only important in communication but also as an extra step in becoming more engaged with the Korean culture in hopes to one day travel and experience it.

*AMES 3468 Environment, Technology and Culture in Modern Japan* examines sources from diverse Japanese media that exhibit Japan's culture and ideology on connecting with nature and the implementation of technology. On a global scale, Japan is well-renowned for its advancements in technology with some of the most recognizable electronics, along with the significance of Japan's relationship in coexisting with nature. Those parts in addition to other aspects of Japanese culture, I find to be intriguing as their traditions and lifestyle are noticeably distinct in comparison to the Western world. By initiating a stronger establishment in the ability to study and observe a culture, it gives me a chance to interact and experience a small portion of the culture without necessarily traveling there.

*AMES 3356 W Chinese Film* surveys different themes represented through Chinese films (including Taiwan and Hong Kong) and starts discussions on how these themes compare within their respectable contexts. Seeing how individuals and/or groups of people use film media as a way of interpreting these complex topics in what they want to achieve, lets the viewer and audience catch a glimpse of the cultural environment which the message is based upon. Similar reasoning as to *Environment, Technology and Culture in Modern Japan*, these films give a perception of some aspects of Chinese culture and society as an alternative method in encountering them. In comparing Chinese film to additional film and media (other Asian countries, Western, etc.), seeing the overlapping similarities and differences that showcases the distinctive style of each region, is what makes seeing different art forms around the world to be

interesting. This gives me the motivation to continue learning more about the people and the world which we all share.

My future plans using the BIS will help aid me in applying for pharmacy school to help me to stand out against competitive applicants due to it not being a common degree to come across compared to traditional degrees like biology, chemistry, etc. The different areas of concentration found within my BIS degree allow me to be well-versed in different fields rather than a single area of study. Learning in an interdisciplinary way with main focuses in Life Sciences, Art, and Asian and Middle Eastern Studies, I will have the knowledge and ability to achieve my dream of becoming a pharmacist to aid the health of others through prescribing and developing new medicine using creative thinking and problem-solving skills. By means of experiencing and experimenting with different art forms, my artistic abilities will be greatly expanded upon to become a better artist for myself. In addition to having the opportunity to study and learn from different cultures, I connect back to my Asian culture.

**BIS/IDIM Program Course Worksheet**

Name:

ID#:

Total number of credits in proposed program:

Total number 3/4/5xxx level credits in proposed program:

Total credits in program left to complete:

Capstone course: \_\_\_\_\_

**Concentration One**

Title: <b>[Life Sciences]</b>						
Dept.	Course Code	Course Title	Complete: Credits (Grade)		Not Complete: Credits (Term)	
ANAT	3601	Principles of Human Anatomy	3			
ANAT	3602	Principles of Human Anatomy Lab	2			
BIOC	3021	Biochemistry	3			
CHEM	2302	Organic Chemistry II	3			
CHEM	2311	Organic Lab	4			
GCD	3022	Genetics	3			

TOTALS:	<b>3/4/5xxx level credits in area:</b>		18		
	<b>Total credits in area (IDIM only):</b>				

**Concentration Two**

Title: <b>[Art]</b>					
Dept.	Course Code	Course Title	Complete: Credits (Grade)		Not Complete: Credits (Term)
ARTS	3110	Intermediate Drawing	4		
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ARTS	3140	Figure Drawing	4		
ARTS	3780	Super 8 and 16 MM Filmmaking	4		
TOTALS:	<b>3/4/5xxx level credits in area:</b>		16		
	<b>Total credits in area (IDIM only):</b>				

**Concentration Three**

Title: <b>[Asian and Middle Eastern Studies - Korean]</b>					
Dept.	Course Code	Course Title	Complete: Credits (Grade)		Not Complete: Credits (Term)
AMES	3001	Concepts in Asian and Middle Eastern Studies	3		
KOR	3021	Intermediate Korean I	5		
KOR	3022	Intermediate Korean II	5		
AMES	3468	Environment, Technology and Culture in Modern Japan	3		
AMES	3356W	Chinese Film	3		
TOTALS:	<b>3/4/5xxx level credits in area:</b>		19		
	<b>Total credits in area (IDIM only):</b>				