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**Teaching Philosophy**

I believe that as a teacher I am a translator, a cheerleader, and a provider of tools. While standing in front of a room full of students, I strive to teach not only the topics at hand, but a [variety of means (assignments)](http://www.bio.ilstu.edu/bawargo/bsc_assignments.htm) (artifact 4) to digest and retain the material. I believe that “memorizing” is a dirty word. Students need to be able to understand. They need to comprehend. I want for students to realize that the topics we cover in anatomy and physiology build on one another, that they all make sense. I believe that my role as an instructor, as a translator, is to take a complex topic that may be completely new to them, and simplify it to the point where we can find common ground. From that baseline, we can expand and explore the topics in detail. I once had a student tell me that he considered his previous anatomy class as “Biology as a Second Language.” That comment resonated with me. There is a tremendous amount of terminology used in Anatomy and Physiology classes. Instead of seeing that as a hurdle, I feel we can use that to our advantage. So much of the terminology is descriptive. It turns into a game or a puzzle: what can I gather from this word without knowing how it is defined? I believe that there is a true elegance to the human anatomy and physiology. I suspect that those students taking an anatomy class have seen hints and glimmers of what makes the human body fascinating. This leaves me in an advantageous position where I can encourage them to look more deeply at the inner workings and share a wonder at what is found there.

One of the things I’ve come to understand is that teaching and learning are not mutually exclusive. There has to be some level of implied contract between the teacher and the student. I, as the teacher, must be willing to invest my time and energies in presenting volumes of complex information in an understandable and hopefully entertaining format. The student has to be willing to attempt to receive that information, but also to work towards retaining it. Each semester, I tell my classes that they have two enormous goals: they need to understand the material and they need to be able to remember it. Comprehension without retention will not serve them in the long run. Because of this, I try to introduce as many memory techniques as possible. I hope that as I introduce new ways of active study, mnemonic devices, acronyms, and tips and tricks, the student can apply those methods successfully to classes other than my own.

Just over ten years ago, I taught my first class. It was a microbiology lab at a community college. I gave them information. At the time, that was all I knew to do, to transfer the information from the textbook to the student. I don’t suspect in that very first class of mine that there was a lot of comprehension. In fact, it was the only class that I ever had that actually ran away from me. As I showed up for class a few minutes late one day, the students saw me walking through the parking lot. They were on their way out the front door and they stopped and turned around; I thought they were going back to our lab. Once I got to the room, I found they’d all left through a back door. Ten years ago, I was a verbal textbook. I fear I parroted information, but didn’t present it in a digestible form. If they didn’t understand the textbook, there was no chance they’d understand me. Those students proved to be a valuable learning tool for me. I went on to teach other classes, each time trying to incorporate a bit of humor and depth to the materials we covered. I realized over time that I had to be better than the textbook. I had to be able to backtrack and explain and relate one topic to the next. I had to make the material make sense. I had to figure out a way of getting the students to see that the material made sense. Over the last decade, I’ve worked at refining my techniques. Today I let the textbook speak for itself. I try to simplify the concepts and encourage a basic ground-level understanding. I’ve incorporated the use of images and stories and analogies to make the material more relevant and relatable.

Anatomy and Physiology is a field of study that is both static and dynamic. Anatomy is unchanging. It is consistent from semester to semester, and from textbook to textbook. Frankly, a spleen is a spleen. Physiology, however, represents movement and motion. In lecture and lab, I try to reflect both of these qualities. Introducing the structures and how they work is one aspect of the lecture and lab. Trying to get the students to realize that these topics are relevant to their daily lives is another. One of the [laboratory assignments](http://www.bio.ilstu.edu/bawargo/lab_Article_Summary_09.htm) (artifact 5) that they take part in tries to bring medical and scientific advances to life. They are charged with finding news articles that relate to the topics we’ve discussed in class. I try to get them to take interest in current events and apply that to what they’ve learned from the lecture material. I hope to instill a sense of relevance between the basic forms we study and the applications in the real world.

The classes that I teach today are worlds apart from the classes I taught ten years ago. The topics are the same, but my approach has evolved. The presentations on each lecture topic are based on the textbook, but significantly modified. For those students who are visual learners, there are plenty of images incorporated into the presentation. The internet has been a valuable resource when it comes to finding animations of physiological events. Sometimes I’ll use an animation or movie clip in class to illustrate a process. Other times I’ll reference it during class and then link to it on the [class website](http://www.bio.ilstu.edu/bawargo/). I have minimal skills as an artist, yet I’ll make full use of the document camera or white board to draw out and explain a sequence or structure. I love to use analogies. It has become almost a game to figure out what real life event can be used to represent a physiological pathway. Red blood cells become delivery trucks. Arteries and veins become highways. Traffic jams illustrate how an event in one location can have far-reaching consequences. I try to appeal to the visual learners. I try to appeal to the auditory learners. The laboratory provides a great opportunity for the tactile learners to fit concepts together. This is half of my approach. This satisfies the comprehension part of the lecture material. The remaining techniques are geared toward allowing the students to have the tools necessary to retain the information we’ve discussed.

During each lecture, the unfamiliar terms will be translated from “biology” to every day English. I’ve tried to introduce several ways of reviewing and remembering the information presented in lecture. Approximately once a week, we’ll have a [series of questions](#mini_review) from the previous lecture. The students are asked to first try to answer the questions without using their notes. They are encouraged to discuss the topics with their neighboring classmates. This promotes topical discussion. It encourages the students to review aloud the material. Often times they will discover that they knew more than they thought they did. Conversely, sometimes they discover that they need to look again at the material to understand it. To encourage the students to use an active study technique, there are a series of assignments that they are asked to submit. Each [assignment](http://www.bio.ilstu.edu/bawargo/bsc_assignments.htm) involves the student creating quiz questions out of the lecture material. The goal is to get the student to approach the notes from a different angle. A simple review of the notes isn’t enough to remember the volume of material that gets covered for each exam. Looking through the notes in order to create exam questions forces the students to become more engaged with the information. Many times a student will approach me after an exam and tell me that they knew the answer to one of the exam questions because they had created a similar question. My goal is for the student to apply some of these techniques to our anatomy class, but also to be able to use those methods to advance their studies in their other classes.

Earlier I had described my role as a translator, a provider of tools, and as a cheerleader. I very strongly believe in both challenging the student with complex material, but also in encouraging them along the way. When students come in to speak with me during office hours, I make a conscious effort to keep a positive spin on our discussions. Rather than instilling a false sense of security, my goal is to bolster their attitudes and make them realize that their goals of doing well in the class are attainable and reasonable. I truly believe that each student has the potential to understand and retain the information we discuss in class. I believe that although I ask them to do a lot in terms of the amount of material we cover, they benefit from the challenge.

**Teaching Assignments and Instructional Development**

In the previous five years my teaching responsibilities have undergone a welcome growth. My initial class at ISU was BSC 182. At the time, the lecture component was separate from the lab. BSC 183 was the lab course and in the hands of the TAs. My first lecture at ISU brought me face to face with the most students I’d ever had in one room. My classes at the community college had a maximum of forty students, and here I was facing almost one hundred. The lectures for BSC 182 had previously been taught by a series of graduate students. I undertook the challenge of making an existing course my own. As the lecture material fell into place, BSC 183 (the lab) was incorporated into BSC 182. Now I was responsible for both lecture and lab content. Over the course of the semester I reviewed the previous lab format and initiated some changes. One of the most significant changes was that I produced a lab manual. Past semesters were relatively free-form and heavily influenced by the TAs that taught them. As the TAs changed from semester to semester, so did the lab. The conflict this created was that there was not a lot of continuity or growth for the lab. Creating the lab manual allowed the students and the TAs to have some instruction and direction for the lab.

Eventually I was also asked to teach BSC 181. Again I set about trying to hone the lectures and presenting understandable information. This course was already established as a lecture and a lab. There was an existing lab manual. I used it as a source of inspiration to create a new lab manual with additional lab exercises. Dr. Tak Cheung was considerate enough to acknowledge the work I was doing with the labs and granted me the title of Lab Coordinator.

Currently I am responsible for two classes a semester: 181 and 182. Being able to oversee the lab has allowed me to order new materials and breathe some freshness into an established lab routine. Both of the lab manuals are undergoing their third revision. Each lab is in the process of introducing new material and exercises to bring the lecture material to life. Both of the lectures undergo what seems like constant refinement. My student load varies from semester to semester. The smallest class I’ve had was approximately seventy five students. The largest class is the current 181 which has an enrollment of almost 130 students.

Both BSC 181 and 182 are not for credit towards a biology major. The student who is likely to take these anatomy classes are students fulfilling requirements for nursing colleges, or other health related fields.

Occasionally honors students will request to do [honors projects](http://www.bio.ilstu.edu/bawargo/honors_projects.htm) for class. I’ve created a list of suggestions that will encourage the honors students to spend more time with the class material, in a meaningful way. The honors assignments are designed to develop more methods of active study, contributing to a deeper level of comprehension.

**Student Evaluations**

In general, the student response to both the course and me as an instructor has been positive. I have included in the artifacts section a copy of the student comments from the Spring 2009 semester of both BSC 181 and BSC 182. (artifact 3) For the student comments, they were asked (1) the course of study they are pursuing, (2) what was good about the class/instructor (3) what needed improvement, and (4) if the textbook was helpful.

In perusing the comments, you can see that many of the students that had opinions felt the class was a good one. The positive comments indicated that I am approachable, knowledgeable, organized, and some even felt that I was entertaining. My favorite comment from last semester was “She rocked! Very easy to understand enthusiastic. I found class enjoyable to come to.” I am pleased to see that the some of the students commented on my analogies and mnemonic devices. Many of the criticism reflect the amount of information presented in the courses. They at times felt overwhelmed by the sheer volume. Some of the students felt I did not bring enough energy or enthusiasm to the lectures.

The numerical data from the evaluations are also included in the artifacts section. I’ll expand on a few categories here.

For BSC 181, 90% of the class strongly agreed (76%) or agreed (14%) that the course was intellectually challenging and stimulating. For BSC 182, 88% of the class shared that sentiment: 64% strongly agreed, 24% agreed.

For BSC 181, 90% felt that they had learned something of value (60% strongly agreed, 30% agreed). In BSC 182, 90% felt they had learned something of value (65% strongly agreed, 25% agreed.)

For BSC 181, 75% felt that their interest in biology and related fields increased as a result of the class (46% strongly agreed, 29% agreed.) In BSC 182, 70% felt the same (42% strongly agreed, 28% agreed.)

For BSC 181, 78% gave me positive marks as an instructor (47% said excellent, 31% said very good.) In BSC 182, 77% gave me positive marks as an instructor (48% said excellent, 29 said very good.)

**Reflections on Evaluations**

Student evaluations can be a helpful tool in finding and shoring up the weakness in both class and instructor. They can also be devastating when you realize that you haven’t been connecting with the class as a whole.

From semester to semester the student evaluations have lead me to believe that the basic premises that I employ are functional: students can be challenged and rise to that challenge beautifully, and that the format of lecture and lab allows the course information to be conveyed and comprehended.

The critical feedback from students has encouraged me to refine my presentation and delivery. On occasion, I’ll have a student, or several, suggest that lectures were difficult because I spoke in a monotone. Several semesters ago, a student brought in recording device into my office. He had a question on part of the lecture and played back to me part of my own lecture. I had never heard my own lecture and speaking style before and was horrified to realize that what I thought was an energetic approach fell short. It was embarrassing to realize that I was giving presentations that I would be unwilling to sit through. It was an eye opener and inspired me to work towards preventing another performance like it. The student’s goal was for elaboration on a concept, but that once incident was profound for me. I found that while trying to project my voice in large lecture halls, especially without the use of a microphone, that my attempt to be heard resulted in a flat affect in the presentations. Once I became aware of it, I worked at modulating the speed of my delivery, the volume, and the tone. I tried to find ways of conveying my interest in the material while still being heard.

Another common student request is for a study guide before the exams. While I have a low opinion of study guides, I realized the need for additional guidance. In some cases the students needed topics reviewed or elaborated on. In other cases, they wanted to assign more value to one topic than another so they could study accordingly. My response has been two-fold. I have started encouraging students to design and share their own study guides, again in an attempt to promote active study. I have also started to do [mini-review](http://www.bio.ilstu.edu/bawargo/mini_quiz.pptx) quizzes at the start of lecture. Each mini-quiz is composed of three or four questions on some of the more challenging aspects we’ve discussed. This is a relatively recent addition to the course, so I await feedback on it.

I’ve learned that each class has its own personality. Some semesters will see my approach to class resonate well with the students. Other times the same approach will be met with blank stares and disinterest. Part of the challenge is trying to adapt to each group and find something to which they will respond. I’ve learned that some evaluations are helpful in retooling the course; others need to be read and taken with a grain of salt. Although it would be flattering if the students liked me, I feel it’s more important that they actually learn from me. I am pleased with the recent evaluations that suggest that the students find value in these courses.

**Reflections on a Teaching** **Challenge: Numbers versus Knowledge**

Although there are many challenges that each teacher faces, the one that gives me the most reason for reflection and evaluation is what I refer to as “numbers versus knowledge.” It is the challenge of trying to be sure that the course is graded in a cohesive fashion and that the grades are a good representation of comprehension. It is also the conflict that arises when competitive students “need to get a B” to gain entrance to the nursing college or maintain a certain grade point average. How accurate is my grading scale in reflecting what they have learned and retained from the class?

Part of the challenge lies in creating exams that are challenging, comprehensive, and fair. Students are given fair warning at the beginning of the semester that there is a large amount of material that I will be asking them to understand and retain. They are informed that my goal is to create exams that are challenging without being unreasonable or picky. My desire is to craft an exam that will challenge, but not overwhelm. Upon completing the exam, I’d like for them to have a sense of accomplishment that they’ve done a lot of hard work and it has paid off.

To alleviate some of the tension that comes naturally to students in a test-taking environment, I’ve instituted some grading guidelines. This approach encourages the students to do their best, while at the same time does not penalize them for the occasional “off” day.

My exams are difficult but fair. Each student is responsible for answering 50 questions. The exams are graded out of 45 questions. The addition of those extra credit questions promotes a bit of a buffer in terms of the grades. There are six exams each semester. However, regardless of our best intentions, sometimes life gets in the way of school and education. Students get sick, family member die, and sometimes they are just overwhelmed with their other classes. To alleviate some of the stress that goes along with that, I’ve developed a policy of dropping the lowest semester exam. This allows students a mental “mulligan” when it comes to their grades. If one exam was harder than they thought it would be, or if they didn’t realize I meant it when I said, “Know this material,” they have the opportunity to forget that low grade ever happened. Because of the large class size, it also cuts down on the conflict that arises when students miss an exam and want to do a make-up exam.

Students want to feel as if their efforts are being rewarded. They want to see their time invested translate into a grade. I have some issue with this line of thought. I am not grading them on their effort; I am grading them on their understanding. Unfortunately, often times effort does not correlate to grade. Students will approach me with the plea, “but I studied for hours!” Knowing that so many of them are going into health care fields, I feel a great responsibility to ensure that they get the grade that they earned, not the grade that they wanted. I have to feel confident that the students walking out of my class with an “A” deserve the grade because they understood the material, not because they needed it for a favorable grade point average. The conflict arises when the students don’t share my dedication to an evaluation of comprehension. They want to see their hard work pay off.

My compromise with this matter is strategic extra credit assignments. Students are not informed at the beginning of the semester that they will have an opportunity to make up some points at the end. I want them doing their best work all along. At the end of the semester, I will invite students to do some extra work. In lecture I allow them to do additional questions for their assignment. This allows them to gain some of those extra points for the extra work, but it’s also an ulterior motive on my part. If they are creating more questions, they are spending more time doing active study with their notes. I am willing to reward that with the points, and they’ll see the benefit when they do better on the upcoming exam. In lab, I encourage the students to create their own lab exam. They are asked to write up a practical exam that reflects their lab material. Again, the extra work is rewarded by some additional points, and develops their study skills. I’ve had some students approach me at the end of the semester telling me that they are going into education, and they had no idea the time, effort, and understanding it took to create an exam. I’m always pleased with this because it suggests to me they are learning more than just anatomy and physiology.

The last exam that the students take in a semester is not a cumulative exam; it covers the last section of material we’ve discussed. In the last few semesters, I’ve added some additional questions. Once they’ve completed the exam questions, they have the opportunity to answer ten more questions that reflect topics from earlier in the semester. I try to include questions that best represent the major themes from the class. Most of them have not heard by word of mouth that there will be review questions. I let them know that any question they get correct will be added into their score.

One of the things that I’ve learned from doing the final review questions is that the students will often score a number that very closely reflects their current class average. For example, the student with the 82% in class might get 8 of the questions correct. It’s a very simple way of checking on their understanding, but so far I’ve been impressed with the correlations. It suggests to me that the grades that they have earned in class are a good representation of how much information they’ve retained.

**Curriculum Development**

Each class is in a state of constant development and evolution. (See [Teaching Assessment](#lab_manual))

Both 181 and 182 have a newer textbook. While the anatomical structures are themselves unchanged, the book provides a fresh approach at introducing some of the topics.

The lab component for 182 has undergone the most significant changes. The previous lab dealt largely with the dissection of a cat. This produced a range of challenges. Some of the students were opposed to dissecting a familiar and sometimes beloved form. From an instructional standpoint, the TAs that excelled at the dissections were leaving and the incoming TAs had never done dissections of this variety. The work was time consuming, but fascinating to those students who enjoyed it. One cat per student pair was intended to be utilized for the entire semester, working on it system by system. While looking for better options, I decided to forego the cat dissections. For the first time in years, there are no cats in the anatomy lab. Instead, I’ve chosen to do dissections of individual organs. This semester they will be working on a pig heart. The hearts are enormous compared to the cat hearts and very clearly demonstrate many of the features that we are interested in. Later on they’ll be dissecting a kidney. Because the concept of the organism as a whole is important, as is the interrelatedness of the organ systems, the students will still have an opportunity to dissect an animal in its entirety. I’ve chosen fetal pigs to illustrate the relationships of the organ systems.

For both 181 and 182 labs, I’m in the process of introducing case studies to help correlate the material from lecture and lab. The case studies are designed to encourage to do some additional reflection on the lecture material and applying it to challenging scenarios.

The laboratory for 181 recently received an influx of supplies that will make the labs more fun. I’m introducing some labs on the nervous system that will allow the students to have the lecture material brought to life. Students will be learning how to tap reflexes, do examinations for vision and hearing, and test cranial nerves. Tuning fork, reflex hammers, and illustrated diagrams will be used to bring the students a better understanding of the sensory systems.

Both of the labs have undergone a change in the evaluation process as well. The original quizzes and exams were created by individual TAs. I’ve taken that responsibility on to be certain the topics covered in the lab quiz accurately reflect the subjects covered in lab. I’ve changed the format in both labs to practical quizzes. The students are asked to move from station to station and identify structures on a microscope, model, or organ. Having the lab manual allows me to maintain continuity between the lab material and the lab quizzes.

**New Course Development**

In a recent conversation with Dr. Cheung, I expressed an interest in developing a new course. The thought is still young in need of maturity. The basis of the class would be a continuation of anatomy and physiology as it relates to common disorders and pathologies. For BSC 181 and 182, I primarily cover normal anatomy and physiology. Because of the volume of material, there is little opportunity to add in disorders and diseases. I am proposing an “Introduction to Pathology” class that would further extend and apply the information gained in 181 and 182. I would love taking 181 and 182 a step further to include common diseases and disorders. This wouldn’t be an in depth pathology class, but would be a good opportunity to compare normal to abnormal function. My intention would be to commonly seen problems and break down causes, effects, and prognosis. Many of the students in 181 and 182 are on a pathway headed towards health oriented careers, and I think this would make for a good transition and introduction for some of the pathologies that they’ll spend some of their lives working with. This again would be an excellent opportunity to include case studies as a means of applying the information that gets presented during lecture.

**Instructional** **Innovations**

The formats of my classes have changed quite a bit from my first class here at ISU. Early on I started using the classroom projectors for PowerPoint presentations. These presentations allow me to included images, animations, and related visuals to complement the lecture notes. I also sought out space for a [class website](http://www.bio.ilstu.edu/bawargo/). The website allowed a common location for the students to visit and have access to the class syllabus, instructions for the assignments, additional resources, and the class calendar.

Soon after the development of the website and PowerPoint presentations, I added templates that the students could download and use for class. I was unwilling to hand students a full set of notes. I knew it was unreasonable to ask them to figure out what to take notes on from a presentation alone. My compromise was to create the templates ([sample linked here](http://www.bio.ilstu.edu/bawargo/BSC%20181%20Templates/75min/BSC181_X2_templates/bsc181_X2_T1_a.pptx).) (artifact 2) Each template is based on the lecture that is scheduled for that day. The template has gaps in it that the student can fill by attending the lecture. The material corresponds to the topics in the textbook, but with enough variation that the student is encouraged to attend the lecture to get the notes. The goal was to allow the students opportunity to write out notes, which is a useful memory technique. It also afforded them the ability to actually spend some time listening to the lectures instead of being consumed with writing the notes.

This semester brings the most recent addition which is the use of Blackboard. Using Blackboard has been a great means of unifying the class and providing information to the students. Originally all the assignments or extra credit work that the students did were submitted in paper. Blackboard has helped tremendously in stream-lining assignments. I have had no issues so far with students not being aware of due dates or deadlines. The “my printer isn’t working” issue has been eliminated. I find that the assignments are created and submitted in a timely fashion. I can access them at any time from almost anywhere without having to lug around 500 papers to grade. I am also appreciating the fact that the students have access to their grades in a confidential and timely fashion. Having the grades posted and available is allowing the students to know exactly where they stand in class.

Lastly, I have requested a computer station for our anatomy lab. The lab is currently outfitted with electricity, and that encompasses the entirety of the technology available. There is no projector, document camera, or computer. There are no jacks and no ports. This creates a lot of challenges when it comes to trying to introduce new technology. I’ve spoken with Dr. Cheung about getting a computer on a cart so the TAs have access to the advantages of technology. They’ll be able to record grades, attendance, and participation in a more efficient fashion. We will also be able to incorporate some software to demonstrate some lab topics that are challenging or unrealistic to do in class. Our EKG machine is elderly and infirm, but a computer program can help the students visualize the normal and abnormal wave forms.

**Scholarship of Teaching and Learning**

I have not had the opportunity to participate in conferences or produce publications.

**Instruction-related** **Recognition**

I am not in an area for which grants are applied. I have received no awards.

**Teaching** **Development Plan**

I think that my range as a teacher has been quite varied from my initial approaches to my current approach. I had referred to myself earlier as a “[verbal textbook](#verbal)” (See Teaching Philosophy) My original teaching style was innocent and uniformed. Having had no education classes, my process was one of trial and error. I presented information, but did not foster understanding. I was entirely dependent on student evaluations to provide the feedback of what was working and what was failing. Since then, I’ve tried to focus on expanding those approaches that work: making the material understandable, making it relevant, and making it somewhat entertaining.

I strive to continually evolve as an instructor. The lectures will be refined and honed. The labs will be in constant development as I try to include new and interesting materials that relate to lecture. I hope to add additional classes to my repertoire. That is an exciting and daunting prospect, having never developed a course from scratch.

I feel very comfortable with the material I present in lecture and lab. What I’d like to do is become more familiar and versed with a range of teaching techniques. I’m often inspired to seek out new methods after talking with fellow instructors. I’m interested in learning of how they approach common issues and what has worked for them. Learning how to promote self teaching, or group work, and to effectively use the clickers are topics that I have an interest in. I foresee myself researching those topics and seeing how they are applicable to what I’m presenting.

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| Education |
|  | National College of Chiropractic, Lombard, IL |
| Doctorate of Chiropractic | 1997 |
|  |
| National College of Chiropractic, Lombard, IL |
| Bachelor of Science: Human Biology | 1996 |
|   |
|  |
| Illinois State University, Normal, IL  | 1994 |
| **Bachelor of Science: Biology** |  |
| Streator High School, Streator, IL | 1990 |
|  |
| Teaching Experience |
|  | **Illinois State University** | **Non Tenure Track Faculty, Instructor** |
|   | 2006 - present |
| **BSC 181 Anatomy and Physiology I**The first semester course of a two-semester class. Topics include cells, tissues, skeletal, muscle, and nervous systems. **BSC 182 Anatomy and Physiology II**The second semester course of a two-semester class. Topics include cells, tissues, skeletal, muscle, and nervous systems.**Lab Coordinator**Reworked and redesigned the corresponding labs for both 181 and 182. Integrated the labs into the lecture course. Created lab manuals to guide both students and teaching assistants through the material.  |
| Heartland Community College | Adjunct Faculty |
|  | 1999- present |
| **BIOL 100 Biology for Health Careers**An introductory biology class for students. Topics include introduction to scientific methods and terminology, fundamentals of biochemistry, cell biology, and genetics**BIOL 114 Contemporary Biology**This biology class includes a laboratory component and targets ecology, evolution, and biological systems**BIOL 116 Genes: Foundation of Life**A one-semester course that discusses DNA on a structural and functional level.**BIOL 121 Essentials of Anatomy and Physiology**A one-semester course with lab that summarizes human biological systems**BIOL 181 Anatomy and Physiology I**The first semester of a two semester lecture and lab course. Topics include cells, tissues, skeletal, muscle, and nervous systems.Heartland Community College, continued…**BIOL 182 Anatomy and Physiology II**The second semester of a two semester lecture and lab course. Topics include the endocrine system, cardiovascular, digestive, renal, and reproductive systems. |
| National College of Chiropractic | Teaching Assistant |
|  | 1996 - 1997 |
|  Provided assistance in physiology labs. |
| Related Experience |
|  | Normal Chiropractic Clinic |
| Chiropractic PhysicianOwned and operated my chiropractic office in Normal and later an office in Bloomington.  | 1998- 2005 |
| Personal Information |
|  | * Married in 2003
* Welcomed our daughter in 2008
 |

Artifacts

1. Lab manuals for BSC 181 and 182
2. Sample template available from class website
3. Student evaluations from Spring 2009
4. Lecture Assignment
5. Lab Articles