



*American Program*

*Courses and Course Ideas*

*Winter 2014*



**Subjects I studied at College/ University:** English Literature, specializing in J.R.R. Tolkien, George Orwell, Literature and the Environment, British Romanticism and Literary Theory. I also have a strong personal interest in politics, especially in the Middle- East.

**Courses I will teach next trimester:**

**EFL**

**Literature:** Literature, fictional and non- fictional, is one of the most multi-faceted, complex and diverse cultural mediums to have been produced by mankind. To get the most out of this incredibly broad topic, it is in many ways as important to ask the question “what is literature?” as it is to study the content of canonical literary texts. Why are some novels more famous than others? Why are some writers marginalized? Who decides which texts make it into the class room? These are the kind of questions my class will be asking. My approach to studying literature will balance close reading of both canonical and less well known novels and poems with fundamental questions about the context in which they are written. We will explore and critique the theories behind popular as well as subversive and controversial texts to develop a sense of critical objectivity, whether we are reciting Shakespeare’s sonnets or reading ‘A Clockwork Orange’. This course will be an exciting opportunity to equip you with the essential skills in research and critical thinking required by universities around the world.

**Courses I have taught in the past or could offer in the future:**

**Middle Eastern Politics:** So much about the Middle East is published by the media today and yet so few of us seriously commit to studying situations such as the Syrian civil war, the Arab- Israeli conflict and Western-Iranian relations. Given the pivotal role in international relations that these nations have, it is crucial to understand their internal workings if we are to seriously understand global foreign policy and affairs. This course will examine in detail the history and political systems of this troubled region and how these contrast with western structures. In addition, through deconstruction and analysis we will think critically about how governments in the west create narratives about the Middle-East which can sometimes be deeply misleading. In sum, this course will equip students with independent thinking, research skills and a critical eye that will ultimately lead to a more objective and secure understanding of international relations in the Middle East and beyond.

**George Orwell Studies:** George Orwell is one of the most quoted and written about writers of the 20<sup>th</sup> century. However, the overwhelming majority of this critical canon centers on ‘Animal Farm’ and ‘Nineteen Eighty Four’. As well as exploring these important texts, this course will pay close attention to Orwell’s lesser known works, including his non-fiction writings such as ‘Homage to Catalonia’, ‘The Road to Wigan Pier’ and ‘Down and Out in Paris and London’ in order to develop a thorough understanding of Orwell’s political thinking and literary techniques. Furthermore, the highly focalized nature of this course will introduce students to the necessary skills to study literature at college/ university.

**J.R.R Tolkien Studies:** Whilst the title of this course may cause fans of Peter Jackson’s ‘The Lord of the Rings’ trilogy to leap from their seat, it should first be made clear that this will be a *literary* course and participants must already be competent students of literature to make the most out of it. Tolkien is an incredibly fascinating but also challenging author and students must be prepared to commit much free time to reading his works during this course, including some of his theoretical essays. The reward will be a deep insight into the creative genius that is ‘Middle Earth’ and an excellent preparation for studying literature or other arts subject at university. As such, this course is particularly recommended for those wishing to pursue literature into higher education.

## Amanda

**Subjects I Studied in College/Graduate School:** Biology, Anthropology, Global Health, and Social Policy.

### **Courses I will teach next trimester:**

**Cell and Molecular Biology:** Biology is the study of living things. In this course we will study the cell – the basic unit of all living things, and genetics. We will look at the cell's structure and function and how cells respire, grow and divide. We will also study photosynthesis; the mechanism by which plants capture energy from the sun. In the second part of this course we will learn about genes, the structures that contain the hereditary information (DNA). We will explore patterns of inheritance with a special focus on human heredity.

### **Courses I have taught in the past, or could offer in the future:**

**Human Biology:** In this course we will explore how the human is organized and study the different human body systems, including the nervous system, circulatory system and digestive system.

**AP Biology prep:** Intensive biology course to prepare for the AP Biology.

**Prerequisites:** One term of chemistry and knowledge of biology.

### **AP Biology**

**Prerequisites:** AP Biology prep or two other biology courses and a chemistry course.

**Sociology:** We will explore social inequalities of class, race and ethnicity, gender, and age. We will examine the relationship between these inequalities and institutional structures such as government, employment and justice.

### **Other subjects I am interested in and might be excited to teach a course on:**

**Human Migration** (look at patterns and reasons of human migration, with a focus on refugees)

**Global Health** (health care in developing countries).

**Experiences:**

B.A. in Human Ecology from College of the Atlantic focusing on: Writing, Education, Latin American Studies, and Art (specifically dark room photography, video, and book illustration).

Peace Corps Volunteer in Honduras Latin America: Community Development focused on sustainable farming, education, and water.

Yoga Instructor: Vinyasa and Iyengar infused instruction that responds to participant needs

**Courses I will teach next trimester:**

**Reading and Writing the English.** Classes for English as a Foreign Language.

**Courses I have taught in the past, or could offer in the future:**

Children's Literature: Studying the writing and art of popular children's books in order to create your own

Writing Your Autobiography

Exploring Creative Process through Literature

Moving Beyond Beans, Corn, and Squash: Sustainable Agriculture Practices in Latin America

Yoga Philosophy as a Practice

**Other subjects I am interested in and might be excited to teach a course on:**

The Life and Death of Sherlock Holmes: Exploring the depths of Sir Arthur Conan Doyle's more notable books in order to figure out exactly who Sherlock Holmes was and how his crime sleuthing methods influenced the current policies of detective work worldwide. We will visit the Sherlock Holmes Museum in Meiringen and hike out to the site of his supposed death at Reichenbach Falls. There will, of course, be a film component to this course.

## Ashley

**Subjects I Studied in College/Graduate School:** Math, Physics, Religion, English.

**Courses I will teach next trimester:**

**AP Calculus:** Calculus is the mathematical study of change, in the same way that geometry is the study of shape and algebra is the study of operations and their application to solving equations. It has two major branches, differential calculus (concerning rates of change and slopes of curves), and integral calculus (concerning accumulation of quantities and the areas under curves); these two branches are related to each other by the Fundamental Theorem of Calculus. Both branches make use of the fundamental notions of convergence of infinite sequences and infinite series to a well-defined limit.

Calculus is an exciting course because many things that you've learned in Math courses up to now come together and really begin to make sense. You see, for example, why you bothered learning radian measure for angles, and why you were introduced to the number  $e$ . And you can solve some amazing problems, which gives you a sense of the power of your own mind. Calculus is essential for advanced study in physics, chemistry, economics, and many other fields.

**Prerequisite:** Precalculus or the equivalent.

**Algebra I:** In this course we will learn to simplify expressions, solve equations and inequalities, graph linear and polynomial functions, solve simultaneous equations, factor polynomial expressions, and solve quadratic equations. If that sounds like a lot of gibberish, let me put it this way. Sometimes a number is reluctant to say just who it is, and disguises itself as a letter. When it does this, we can use a number of techniques to find out who's hiding behind the disguise. It's something like detective work. And it can be very satisfying to uncover the culprit.

**Courses I have taught in the past, or could offer in the future:**

**The Bible as Literature:** The Bible, composed of the Hebrew part (called the Old Testament by Christians) and the Greek part (New Testament), is one of the great works of world literature. If you are not familiar with it, you will miss countless allusions and references when reading almost any later work of European or American literature. The reason there are so many allusions and references in later literature is not simply because the Bible was the Church's favorite book, but because there are so many powerful, elusive, hilarious, tragic, dirty, magical, profound, and mysterious stories in it. We will read many of these stories much as one might read Shakespeare plays or Kafka parables, paying only passing attention to how they are interpreted by organized religions.

**Physics: Mechanics:** In Physics, Mechanics does not refer to car repair. Rather, Mechanics is the branch of physics concerned with the motion of objects or particles under the action of forces. We learn the precise physical meaning of such common words as velocity, acceleration, force, energy, momentum, impulse, gravity, weight, mass, and time. We learn to use mathematics – depending on the level of the course, algebra and trigonometry, or calculus – to make predictions about how objects will move in various situations.

One of the most exciting aspects of mechanics is how counterintuitive it is. You will probably be amazed to find that almost all of your intuitive ideas about forces and motion will agree with ideas expressed by Aristotle over two thousand years ago, rather than with the modern understanding initiated by Galileo and Newton in the 16<sup>th</sup> and 17<sup>th</sup> centuries. Thus, a course in mechanics will probably stand many ideas that you think of as “obvious” on their heads, and your view of the physical world will undergo a significant revolution. And if we touch on 20<sup>th</sup> century physics, you will discover that an even wilder revolution awaits you there!

**Other subjects I am interested in and might be excited to teach a course on:**

Writing fiction; Philosophy.

## Sonia

**Subjects I Studied in College/Graduate School:** Literature, French Literature, Urbanism, Theater, Mime, Conference Interpreting.

**Courses I will teach next trimester:**

I mainly teach **EFL, all levels**, total beginners to advanced.

On a more advanced level, reading mother tongue texts, I generally choose a broad theme and the students read novels or non-fiction texts on the theme. We choose topics for research and the students do several oral presentations. We work on vocabulary, have dictations, write essays, and work on grammar as needed.

**Courses I have taught in the past:**

Health and Sickness – Image - Origins - Blacks in America - Discrimination and Racism - Rom, Gypsies, Travelers - Being a Teenager, Becoming a Woman – Heroes - Growing Pains - India – Austria: Fantasy – Outsiders - Courage and Survival – Conflicts - Other Lands, Other Worlds - Detectives - Coming of Age – Identity - Betrayal, Prejudice and Divided Societies - Making a Difference - World War II - World War I

**EFL Theater:** this entails learning all the parts of the play, all the vocabulary from the play, learning correct pronunciation of the text, as well as working on improvisations, body language, stage and acting techniques, culminating in two performances of the play before audiences. We generally do very little grammar or writing in this course. Plays performed so far: Ernie's Incredible Illucinations (Alan Ayckbourn), The End of Civilisation as We Know It (Mark D. Kaufmann), Nothing But the Truth (Michael Maynard) and The Whole Shebang (Rich Orloff).

**Courses I could offer in the future:**

I could imagine doing any of these themes again, as well as other historical periods, other countries, journal writing, travelling....

I have been toying with the idea of doing a course on gender questions, or another one on adventure/fantasy stories. I am very interested in anything medical, as well as inventions and discoveries. Actually, given the right book, I am interested in everything.

## Paul

**Subjects I Studied in College/Graduate School:** Electrical & Electronic Engineering, Digital Signal Processing

### **Courses I will teach next trimester:**

**Pre-calculus:** Pre-calculus follows on from algebra 2. In precalculus the emphasis is on understanding the behavior and characteristics of functions. Functions are mathematical relationships found in everyday life, in many fields from finance to science. As the name suggests pre-calculus, provides the foundations required for Calculus and higher level Mathematics courses.

**Physics: Mechanics:** In Physics, Mechanics does not refer to car repair. Rather, Mechanics is the branch of physics concerned with the motion of objects or particles under the action of forces. We learn the precise physical meaning of such common words as velocity, acceleration, force, energy, momentum, impulse, gravity, weight, mass, and time. We learn to use mathematics – depending on the level of the course, algebra and trigonometry, or calculus – to make predictions about how objects will move in various situations.

**Physics: Electricity:** As the name suggest, this involves the study of electricity. Electricity is a rather mysterious form of energy, in that unlike other forms of energy, it cannot be seen directly. This branch of physics analyses how electricity behaves and uses mathematical models to explain how other associated phenomena, such as electric and magnetic fields exist. The course heavily draws upon Calculus to develop models which accurately predict the behavior of electricity.

**Electronics:** Electronics today is the method by which electricity can be processed and controlled using semiconductor devices. In the world around us we are surrounded by signals, be it light, heat or sound. A typical electronic system employs transducers to convert these signals into electrical signals, whereby they can be processed by semiconductor devices. This course covers both the practical and theoretical aspects of electronics and introduces common electronic components, test equipment and basic Electronic systems.

### **Courses I have taught in the past, or could offer in the future:**

**SAT Math exam preparation:** The SAT is a very important exam for university entrance, yet there is so little time set aside to prepare for such an important exam. In this course we practice exam techniques and tactics to help achieve a higher score in you SAT Math exam .

**Microprocessors:** Microprocessors are really amazingly versatile electronic components, whose characteristics depend upon the users program that is contained within them. Microprocessors are all around us, from children's toys to automatize controllers and mobile phones. This course would involve both building microprocessors circuits and programming microprocessors. Some knowledge of basic electronic components would be required as a prerequisite for this course.

## Betsy

**Subjects I studied in college:** Geology, Chemistry, Physics, Art History, French.

### **Courses I will teach next trimester:**

**AP Chemistry:** Chemistry is the study of how things work on a molecular level. We see that grass is green and the leaves are now yellow, but how does that work atomically? When you put pure sodium in water, it causes an explosion...why?

In AP Chemistry, in addition to covering some of the fundamental concepts of Chemistry, such as atomic theory, chemical reactions, thermochemistry and equilibrium, we focus on mathematical relationships within Chemistry. You will learn how to apply complex equations to figure out rates of reactions, how much product you can expect from certain amounts of reactants and the amount of energy that you can expect from combusting certain substances, among other things.

AP Chemistry is challenging and rewarding. You will spend 2 ½ hours one afternoon each week in the lab in addition to time in class doing simulated labs and analyzing demonstrations. There is one fairly large homework assignment each week. You will learn how to manage your time effectively. You will work hard, but you will feel that you have accomplished a lot at the end of the year!

**Prerequisite:** Chemistry (and the course begins Fall term).

**Chemistry:** As mentioned above, Chemistry is the study of how things work on a molecular level, or a level that's so small that we cannot see it. A lot of the concepts in Chemistry are abstract, but in this Chemistry class we try to do as many hands-on, inquiry-based and interactive activities as possible to make the content both interesting and accessible. You can expect a lot of group work, labs and discussion as well as work that requires you to engage your brain. Passive learning is not allowed! You will get homework assignments 3-4 times a week that will take anywhere from 5-30 minutes. I think that you will realize that Chemistry is fun!

**Climate Change:** I will be co-teaching a class on climate change with Dan. We will focus on a few key aspects of climate change, such as is there evidence that humans are causing climate change? If so, what is the evidence and how do we analyze it? Can we do anything to stop it? If so, what? This will be an interdisciplinary class in which we focus on both the scientific and social side of climate change.

### **Courses I have taught in the past and could teach in the future:**

**Environmental Science: “The Story of the Hasliberg”** Using the environment of the Hasliberg as our inspiration and guide, we study several fundamental concepts of environmental science. We answer questions such as: How did the mountains here form? Why are they shaped the way they are? What is the dominant flora and fauna of this area and what has been the evolution of these living things? Why and how did humans inhabit the Hasliberg? At the end, we create some sort of final product, such as a movie, booklet or newspaper that explains the story of the Hasliberg.

**Dan**

**Subjects I Studied in College/Graduate School:** Literature, Politics, Philosophy, and History of Ideas.

**Courses I will teach next trimester:**

**AP Literature and Composition:** This class involves closely examining works of imaginative literature (prose, poetry, and plays) with an eye towards the intricacies of their content, their style and structure, and their overall meaning in terms of theme, moral, and social and political commentary. In Fall Term, we began by reading several texts from the Renaissance period, Shakespeare's Hamlet and two Renaissance poems, after which we turned to a selection of works that belong to the artistic movement known as Romanticism. These included Nathaniel Hawthorne's The Scarlet Letter, short stories by Edgar Allan Poe and H.P. Lovecraft, and poems by Wordsworth, Coleridge, Byron, Shelley, and others. Historically, Romanticism was followed by the movement known as Realism, and we finished Fall Term with a study of classic nineteenth century Realism by writers such as Flaubert, Dickens, and Chekhov. In Winter Term, we will move on to twentieth and twenty-first century literature from the Modernist and Postmodernist periods, including a play by Samuel Beckett and novels by Virginia Woolf and William Faulkner.

**AP United States History:** This class is an in-depth survey of the history of the United States. In Fall Term, we began with the settlement of the Americas by pre-Columbian civilizations and worked our way through European settlement (early 1600s), the American Revolution (late 1700s), the Early Republic (early 1800s), and the Civil War (mid-1800s), up to the closure of the American frontier (late 1800s). In Winter Term, we will focus on twentieth and twenty-first century American history, from the build-up to World War I through to the Great Depression, World War II, the Cold War, the Civil Rights Movement, the Conservative Resurgence, and the rise of the security state after September 11, 2001.

**Courses I have taught in the past, or could offer in the future:**

**English:** I enjoy teaching literature that is somehow experimental -- literature that is stylistically or structurally very different from the sorts of works that follow one or more characters through a series of events from beginning to end. In the past, this has led me to teach English literature written by immigrants to English-speaking countries who use the English language to very unique effect, as well as teaching a course devoted to stories that jump back and forth through time in surprising and confusing ways. I have also previously offered creative writing.

**History/Social Sciences:** Most of my history courses focus on American history. I have previously taught an in-depth course on the political and ideological events of the American Revolution, as well as teaching the history of slavery and an introduction to world history. I would someday like to teach a course in Australian history for anyone prepared to be intrigued, surprised, and confronted by a series of events that are more complex and unsettling than most people would imagine.

**Other subjects I am interested in and might be excited to teach a course on:**

For English, I would love to teach a course focusing on graphic novels and a course focusing on cinema. For Social Sciences, I would like to teach a philosophy course focusing on metaphysics -- the branch of philosophy that deals with such thorny issues as the existence or non-existence of God, the nature of morality, and the conflict between fate and free will.

**Melissa**

**Subjects I Studied in College/Graduate School:** Italian and English Literature

**Courses I will teach next trimester:**

**AP English Language:** The title of the course is "Language and the Construction of Experience." We investigate the complex relationship between words and worlds. How do words work to articulate the depths of our experience, and at the same time, how do they manipulate and frame the "truth"? We close read literary and non-fiction texts (including images) to discover the ways in which an author shapes a reader's vision. Our goal is to learn to ask questions about a writer's choices and to recognize when those choices reflect certain assumptions we may or may not share. Books we will read next term include: *Regarding the Pain of Others* by Susan Sontag and *Unspeak* by Stephen Poole.

**Courses I have taught in the past, or could offer in the future:**

**English Lit classes, all levels** (Themes: The Anti-hero, Exile and Return, The Dangerous Imagination, Mirrors and Mirages, Metamorphoses).

Greek Literature and Mythology

Reading Poetry

EFL all levels

**Other subjects I am interested in and might be excited to teach a course on:**

Modern and Contemporary Drama (Anton Chekhov, Samuel Beckett, Caryl Churchill), Existentialism, Creative Writing, Memoir., Franz Kafka, The American South (William Faulkner, Flannery O'Connor, Carson McCullers)

## Martin

**Subjects I Studied in College:** World, European and Environmental History, Political Science, Political Philosophy, International Relations, Security Studies.

### Courses I will teach next trimester:

**AP World History:** In this course we will explore the history of humans and our interactions with each other and the world we inhabit. We will try to unravel how the things we take for granted today as a natural part of human society (government, richer and poorer countries, war, automobiles, global warming, professional politicians, newspapers, racism, capitalism. . . the list goes on) came about. The very complex world we inhabit is not the product of the static interactions of states or a few prominent men but the result of fluid social, economic, cultural and political interactions between various groups of peoples with each other and with their environment across the ages. Understanding these processes of change is more important than the ability to recall dates and events. At the same time we will discover surprising continuities across various times and places.

World History is a challenging subject, one that will demand of you both knowledge of the entire record of human history (everything important that has happened in the last 10,000 years!) and in-depth knowledge of several key issues. Moreover you will be required to master the historian's skills: critiquing sources, analyzing points of view and context, and constructing complex arguments based on disparate facts and complex theories. The knowledge and skills gained in this course will serve you a lifetime by allowing you to better understand the world you live in and the people you share it with.

**Prerequisite:** Any history course and a high level of proficiency in written English.

**Nazi Germany and World War Two:** In this history course we explore the history of the Nazi regime in Germany and its role in the Second World War. The course will be centered on five questions: 1.) how were Hitler and the Nazis able to assume control of an advanced, democratic country 2.) what was life like inside Nazi Germany 3.) why did Hitler and the Nazis seek to persecute and later murder the European Jewish population 4.) what was the regime's role in the Second World War 5.) how complicit were non-German countries and people in the crimes of the Nazi regime?

**Prerequisite:** Students should be able to read and write relatively proficiently in English.

**Global Studies (formerly Politics and Society):** The world faces a lot of problems today: war, poverty, global warming, droughts and a failing world economy. It will primarily be up to you and your generation to solve these issues. With this in mind, this course seeks to introduce you to basic government structures (voting systems, political cultures, institutions and arrangements), issues of class, race, sexuality and gender, as well as basic sociological and economic theories and concepts. Moreover, we will take a careful look at the "international system", that is how countries interact (or don't) with each other through trade, diplomatic agreements, war, etc. In addition to the content, this course emphasizes skills necessary to succeed in future social studies classes, such as reading primary and secondary documents and creating and presenting a unique argument in writing or in person.

### Courses I have taught in the past, or could offer in the future:

#### Other subjects I am interested in and might be excited to teach a course on:

Environmental history, history of mountaineering and climbing, history of the Alps.

## Djahane

**Subjects I Studied in College/Graduate School:** Development Studies, Environmental Studies, Political-Economy, Sociology, Science and Technology Studies, Anthropology, Geography

### Courses I will teach next trimester:

**Global Food Politics:** Everyone eats, and therefore everyone has a relationship to global food and agriculture systems. But because less than one percent of the US population earns a living from farming, most Americans rarely think about where their food comes from. This course will explore the origins of our current global food system, the political-economic relations that structure it, and emerging alternatives to industrial food. Beware, this course is not just about food and farming! We use current issues in the world food system as an entry point to understand today's global political and economic system and its problems.

Prerequisite: **One social science or history course** or the equivalent

### Courses I have taught in the past, or could offer in the future:

**The Social Life of Things:** In this course we will try to understand globalization by tracing the life of things. We will write 'stories' about how, and with what consequences, people around the world are connected in the production, consumption and disposal of commodities. We will read about commodities – such as bananas, coffee and clothing – and comment on the structure and social issues connecting production, exchange, consumption, disposal and waste of these and other commodities. In addition to using commodity chains as a way to think about globalization, you will build your capacity to write socially engaged and compelling stories about 'stuff' in the global economy.

**Development Studies:** In this course, we attempt to understand international development. We will look at questions such as: Why are some countries rich and others poor? How did this uneven global system come about? What is the cost of economic growth? Are economic growth and sustainability compatible? We will also study global issues, such as the environment, human rights, security, and their particular impact in different parts of the world. Throughout the course, we will examine these issues from a historical perspective, so that you will be able to understand root causes of today's problems. In this course, you will not only gain a deeper understanding of development but you will also learn about how you can contribute, as global citizens, to efforts to make the world more just.

**Global environmental Studies:** From the rapid loss of forests, topsoil and clean water to global climate change and the waste crisis, the environmental has become a topic of widespread public concern, if not anxiety. At the same time, the global distribution of wealth appears to be growing starker day by day. In this course, we explore the relationship between nature and poverty. Does poverty cause, or at least reinforce, environmental problems? In what ways and under what circumstances does environmental degradation and attempts to reverse it result in increased poverty?

### Other subjects I am interested in and might be excited to teach a course on:

**Gender and Technology:** Why are some technologies such as cars and computers associated with men and masculinity? How did vacuum cleaners and sewing machines become gendered "female"? How do technologies reinforce existing gender stereotypes and relationships? In this course, we explore these questions .

I can also teach: international relations, economics, political theory, race studies, gender studies and LGBT studies.

## Marnie

### Subjects I Studied in College/Graduate School:

Primary school education, German, children's and young adult literature.

### Courses I will teach next trimester:

**EFL:** In my EFL classes I try to balance skills practice (reading, writing, speaking and listening) with detailed language study, using as many real-world texts as possible. That means looking at websites, newspaper articles, current affairs, TV shows, short stories and novels written for native speakers. We use grammar study to help understand the nuances of texts and allow students to create more nuanced texts themselves. We discuss, debate and explore ideas orally before writing about them, and students should be ready to be brave about trying out new language. Reading for fun is also an important part of my classes, and I often ask students to choose their own novel based on what they love to read. In upper-level classes, we focus more on text analysis, essay-writing skills and reading for information.

### Themes I have taught in the past:

Project management, Australia, Feminism and women's issues, Sherlock Holmes.

### Other subjects/themes I am interested in and might be excited to teach a course on:

Academic English, New young adult fiction, graphic novels, Australian culture and landscape, psychology, health, British culture, project-based courses to help improve aspects of the Ecole, music and the arts, English book club.

## Katherine

**Subjects I Studied in College:** Mathematics, Secondary Education, Child Psychology

### Courses I will teach next trimester:

**Pre Calculus:** The course you need for Calculus. In this course you start to put many of the themes you have seen in isolation together in one problem- simplifying algebraic expressions, graphing to find maximum and minimum values, rules for dealing with fractions, powers and radical signs. It also introduces you to newer terms used in Calculus such as logarithmic functions, exponential growth and decay, as well as the unit of radians.

The study of pre calculus provides procedures for solving problems in the analysis of change: determining rates of change, predicting the amount and explaining the quality of change, and connecting the concepts of change with the language and symbolism of algebra that describes change. A pre calculus course also develops tools for solving geometric problems: using formulas to explore changing amounts like area or volume and connecting these geometric concepts to the language of algebra that describes geometry.

**Prerequisite:** Algebra I, Algebra II, Geometry

**Geometry:** The study of shapes and space. The branch of mathematics that deals with the deduction of the properties, measurements, relationships of points, lines, angles, and figures in space. The subject explores and uses traditional formulas used to measure various amounts of space in both 2 and 3 dimensions. As an introduction to Geometry, we began by learning the notation and the various symbols used in the study of geometry. Concepts such as quadrilaterals, circles and triangles were all introduced followed by some of their basic properties. Students have begun the study and investigation of parallel lines and the properties that can be applied to their transversal. A portion of every new topic has incorporated a unit of construction where students are taught how to use a compass and straight edge or ruler. We have covered the construction of parallel lines, perpendicular bisectors, angle bisectors and the median as well as the altitude of various kinds of triangles. We have used a protractor as well to measure and construct angles.

**Prerequisite:** Algebra I

### Courses I have taught in the past, or could offer in the future:

**Electronics:** A basic introduction to electronics using all hands-on activities. Themes such as resistance and capacitance are explored. We also practice building circuits in parallel and in series and learn through observation what these terms mean.

### Other subjects I am interested in and might be excited to teach a course on:

History of Mathematics, Project Based Learning.