

# **Sierra College Honors**

## **The Honors Course Contract Proposal INSTRUCTION PACKET**

**All Contract Proposal documents must be received by  
3pm on Thursday of the 4<sup>th</sup> week of the Semester**

Fall and Spring Semesters only

No Honors Contracts allowed during Summer Semester

You will need Adobe Reader to open and complete the Honors Contract Proposal and the Student Checklist. If you do not have Adobe Reader, you can download the latest version for free at <http://get.adobe.com/reader/>.

Two copies of the Honors Course Contract Proposal, each with original instructor and student initials/signatures, along with a completed and signed Honors Contract Proposal Student Checklist must be submitted in a large envelope addressed to the Honors Committee, c/o Jennifer Kattman, Weaver Hall, Room W-217. You must also email an electronic copy of the Honors Contract Proposal. Make sure a copy is retained by the instructor and/or student.

To ensure that the Honors Program meets its transfer agreements, each section within the Honors Contract Proposal must be completed. Please be advised that the Honors Committee will refuse consideration of a proposal for 1) Failure to complete any of the Honors Course Contract Proposal sections; 2) Failure to use the current Honors Course Contract Proposal form; or 3) Failure to meet the submission deadline (Honors Course Contract Proposals must be received by 3 p.m. on Thursday of the 4<sup>th</sup> week of the semester). Absolutely no late proposals will be accepted! **Please make sure if you are using campus mail that the items arrive in Jennifer Kattman's mailbox by 3pm on Thursday of the 4<sup>th</sup> week of the semester.**

### **IMPORTANT INFORMATION BEFORE YOU START**

- Any degree-applicable course at Sierra College, with the exception of Developmental Education courses, may be taken for Honors credit.
- High-School Enrichment Students may **NOT** engage in Honors Contracts.

## The forms you will need:

- 1) Honors Course Contract General Information
- 2) This Instruction Packet
- 3) Honors Course Contract Proposal
- 4) Honors Course Contract Proposal Student Checklist

All forms may be found online at  
[www.sierracollege.edu/programs/honors.htm](http://www.sierracollege.edu/programs/honors.htm)

## THE HONORS COURSE CONTRACT PROPOSAL STEP-BY-STEP INSTRUCTIONS

Please note that the form may be saved (use the “Save As” function instead of “Save” function) and emailed between the student and instructor at any time as it is being completed. Since sections are required to be filled out by different people, you may complete the sections you need to complete then email the form to the other party to complete his or her sections. Both the instructor and student should review all sections and ensure they are complete and accurate before they sign the Honors Course Contract Proposal.

### **SECTION I (May be completed by the student and/or the instructor.)**

**Items 1-10:** Please enter all required information.

**Item 11:** Please state the overall objective/purpose of this Honors Contract. Specific assignments and activities should not be stated here.

### **SECTION II (May be completed by the student and/or the instructor.)**

**Items 1-7:** Please check the boxes of the individual student learning objectives that will be addressed by this Honors Course Contract. A minimum of **THREE** must be checked (you may check more if you wish). Then, for each learning objective that is checked, give a very **specific** and **detailed** description of assignments and/or activities that will be completed for the related learning objective. For each assignment or activity listed, you must also include a description of the **tangible evidence** that will be produced as a result of completing the activity or assignment which demonstrates achievement of the related learning objective. Examples of assignments and activities (along with associated tangible evidence of completion) can be found at the back of this packet. Please be sure the assignments or activities listed are above and beyond the regular scope of the course. **Please note:** If you are creating one large assignment that will address 3 or more objectives, list the only the elements of the assignment related to each particular objective (don't list everything 3 times).

### **SECTION III (MUST be completed by the instructor.)**

Please describe how each assignment and/or activity will be assessed. This must be very specific and there must be an assessment for each assignment and/or activity listed in Section II. **Please Note:** If there is one large assignment that addresses 3 learning objectives, please list the assessment criteria for the single assignment only once, but make sure the criteria measure all 3 objectives. Examples of Assessment Criteria can be found at the back of this packet.

### **SECTION IV (MUST be completed by the instructor.)**

Please specify what the student will gain above and beyond what is gained by students in your regular course environment by completing the components of this Honors Contract. This is crucial for the Honors Committee to assess whether or not the activities/assignments are truly Honors coursework. For examples, please see the back of this packet.

**\*\*\*\*At this point, save an electronic copy of your Contract Proposal\*\*\*\***

### **SECTION V (MUST be initialed by BOTH the student AND the instructor.)**

Please note that the instructor and student MUST meet for a minimum of 15 minutes every 2 weeks. This can be during regular office hours or outside of regular office hours. You cannot have more than 2 weeks between each meeting. For example, you cannot choose to meet for 30 minutes every 4 weeks. You may, however, meet every week for 15 minutes, every 2 weeks for 30 minutes, etc. This is crucial to ensuring successful completion of the Honors Contract. It allows the student and instructor to be aware on a regular basis of the progress being made and challenges that are being faced. In the event that a challenge arises during the semester that causes changes to the original Honors Course Contract, it is possible to amend the original contract. However, all Amendments must be submitted to Jennifer Kattman on or before the semester Withdrawal Deadline (see the semester calendar for the exact date). Please email or see Jennifer Kattman for the appropriate Amendment paperwork.

### **SIGNATURES (MUST be signed by BOTH the student AND the instructor)**

You are required to submit 2 paper copies of the Honors Course Contract Proposal, each with original signatures. Please print out 2 copies of your completed Proposal then initial and sign **each** of them. Do NOT print 1 copy, sign it, and make a copy of the signed version. You must also email an unsigned copy to [jkattman@sierracollege.edu](mailto:jkattman@sierracollege.edu).

## **STUDENT CHECKLIST INSTRUCTIONS** **MUST be completed and signed by the STUDENT**

This form must be completed using Adobe. No hand-written forms will be accepted. Please type the Student's First and Last Name and the Faculty's First and Last Name at the top of the page.

### **General Checklist**

**Items 1-6:** Please read each item carefully and check each box once the items are complete.

**Items 7-9:** Please enter the correct numbers in the boxes to the left of each question.

**Item 10:** Please type in the Semester and Year that you successfully completed your last Honors Contract. If you have never successfully completed an Honors Contract, enter **N/A** in the box.

### **Detailed Checklist**

Please make sure you have your completed contract in front of you as you go through each question. Read each question carefully and check YES or NO on the Checklist. If there are any NO responses, you must go back and revise your Contract Proposal until all questions are marked YES. This checklist is very similar to the one the Honors Committee will be using to assess your Proposal, so it is to your advantage to be confident that all answers are YES. Then make sure you sign and date the Checklist. It is a good idea to save an electronic copy of this checklist once it is completed.

## **SUBMISSION INSTRUCTIONS**

**EITHER students OR instructors may submit materials**

Materials must be **RECEIVED** by 3pm on Thursday of the 4<sup>th</sup> week of the semester. Please submit materials in a large envelope addressed to:

**The Honors Committee  
c/o Prof. Jennifer Kattman  
Weaver Hall, Room 217**

If sending materials via campus mail please ensure they **arrive** in Jennifer Kattman's mailbox by 3pm on Thursday of the 4<sup>th</sup> week of the semester. Otherwise, please deliver materials to Jennifer Kattman personally (either during office hours or by sliding materials under her office door). It is advised that an email be sent to [jkattman@sierracollege.edu](mailto:jkattman@sierracollege.edu) to verify receipt if you are not handing materials to Jennifer Kattman directly.

### **What to submit:**

- 1) Two hard copies of the Honors Course Contract Proposal, each with original signatures and initials.**
- 2) One copy of the completed Student Checklist with student's signature.**
- 3) Email an unsigned electronic copy of the Honors Course Contract Proposal to [jkattman@sierracollege.edu](mailto:jkattman@sierracollege.edu). Do not email the Student Checklist.**

# EXAMPLES TO REFER TO WHILE CREATING YOUR HONORS COURSE CONTRACT

The examples listed below (assignments/activities, assessment criteria, and how components differ) may be used for ideas for your Honors Course Contract Proposal or you may use your own original ideas for your Contract. **PLEASE BE AWARE THAT SOME OF THESE EXAMPLES ARE FROM A TIME WHEN LESS SPECIFIC INFORMATION WAS REQUIRED. IT IS YOUR RESPONSIBILITY TO ENSURE YOU ARE FULFILLING THE CURRENT HONORS CONTRACT REQUIREMENTS (DETAILED IN THE INSTRUCTIONS IN THIS DOCUMENT).**

## **SECTION II: Assignments/Activities and Associated Tangible Evidence**

Please note, when listing your assignments/activities and tangible evidence, separate the elements according to the specific objectives. Do NOT list an element of an assignment/activity for an objective if it is not related to that particular objective. The assignments/activities below are NOT necessarily separated into individual objectives as this was not a requirement when some of them were created.

### **AGRICULTURE 200**

Student will do background research regarding the effects of speed on the distance of a sliding stop of performance horses. This information will be presented in a literature review. Student will collect data using horses, stop watches, and a GPS device. Data will be analyzed. Student will prepare a poster and talk to be presented in class as well as at the Sierra College Science Symposium.

### **AGRICULTURE 200**

Do background research regarding the effects of testosterone on rate of gain as well as the development of secondary sex characteristics. This information will be presented in a literature review. Collect data (weights every other day) on three treatment groups of mice: castrated, vasectomized, and intact. Analyze the data. Prepare a poster and talk to be presented in class as well as at the Sierra College Science Symposium.

### **AGRICULTURE 200**

1. The student will do background research regarding current body of knowledge surrounding interdermal vaccinations in the feline species compared to subcutaneous and intramuscular techniques. Future applications of this technique will be explored. This information will be presented in a literature review.
2. The student will complete a paper and presentation in poster format describing the current body of knowledge surrounding administration of vaccines to the feline species interdermally.

### **AGRICULTURE 200**

1. The student will do background research regarding current body of knowledge surrounding genetic testing in dogs, Beagles specifically, and assessing the use of genetic testing as a tool for making breeding decisions. This information will be presented in a literature review.
2. The student will complete a paper and presentation in poster format describing the current body of knowledge surrounding genetic testing in dogs, Beagles specifically, and assessing the use of genetic testing as a tool for making breeding decisions.

### **AGRICULTURE 200**

The student will complete a presentation in poster and in talk format describing the land use trends in Placer County. The information will be assessed and the impact on agriculture will be determined. Future land-use planning will be evaluated for its impact on agriculture as well.

### **AGRICULTURE 200**

1. Student will do background research regarding the impacts of laser surgery and conventional surgical techniques (scalpel) on recovery period in animals undergoing common procedures such as spays and neuters, de-clawings and mass removals. This information will be presented in a literature review.
2. Student will observe recovery periods (and surgeries) using laser and conventional techniques. Student will interview veterinarians regarding the impacts on recovery period of the chosen method for each surgery observed.
3. Data will be collected by observing recovery period for surgeries by interviewing owners once animals have been released and observing them while they are still patients. The same surgeries will be compared. To increase the sample size the three most common surgeries will be observed and will only be compared to each other. The three surgeries are: Spays (cats), De-clawing (cats) and mass removal (this will depend on the species available for observation ... same species comparisons will be made).
4. Data will be compiled and analyzed. Recovery periods between laser and scalpel surgeries will be compared.
5. Paper and poster will be presented in class as well as at the Sierra College Science Symposium.

### **AGRICULTURE 200**

1. Student will do background research regarding the effects of parasites on horses as well as prevention protocols. This information will be presented in a literature review.
2. Student will collect equine fecal samples. Student will interview owners of the horses from which fecal samples were collected to determine the anthelmintic protocol employed (active ingredients of anthelmintics will be determined).
3. Data will be collected by assessing fecal samples using the float method.
4. Data will be analyzed and compared with prevention protocol.
5. Prepare a poster and talk to be presented in class as well as at the Sierra College Science Symposium.

### **AGRICULTURE 203**

1. Do background research regarding the impact of various diets on the rate of gain in mice. This information will be presented in a literature review.
2. Design an experiment to assess the effects of two diets varying in nutritional content (most likely carbohydrate or fat content) on the rate of gain in mice.
3. Prepare a poster and talk to be presented in class as well as at the Sierra College Science Symposium.

### **AGRICULTURE 203**

1. Do background research on the impact of bacterial infection in dairy cattle to milk production as well as the economic impact to the producer. Determine the management considerations, treatment and prevention for such infections.
2. Collect milk samples from dairy cattle. On blood agar plate the milk samples, incubate and identify cultures using antibody discs. Analyze the data collected.
3. Prepare a poster and talk to be presented in class as well as at the Sierra College Science Symposium.

### **ANTHROPOLOGY 1**

The student will write a report synthesized from the following 2 formative assessment components:

1. Conduct primate observations of three primate groups at the Sacramento Zoo with respect to conflict, cohesion, parental contribution, and creativity/ingenuity. Document observations in a uniform way using standardized primate observation criteria [France, D.L. (2006) Lab Manual and Workbook for Physical Anthropology (6<sup>th</sup> edition). Belmont: Thomson Learning.]
2. Compare own observations with those of primatologists in the field (Using Primate societies. Edited by B.B. Smuts, D.L. Cheney, R.M. Seyfarth, R.W. Wrangham, and T.T. Struhsaker. Chicago: University of Chicago Press.) and other relevant articles as source material for base comparisons.

The final report should be on a level consistent with the highest standards of a community college investigative report including, but not limited to, an introduction, the main body of the report, a conclusion, and a reference list. Supporting materials in the form of standard observation charts utilized in the field, tables/figures, etc., are to be included as appropriate.

### **ANTHROPOLOGY 2**

Student will:

1. Write a university-level research paper detailing the various cultural practices in West Africa with particular emphasis on how health is affected by alternative medicine, superstition, and traditional cultural practices in Africa today.
2. The research paper will require a variety of sources that must be obtained in order to produce a compelling anthropological analysis. Much of the information will be found in journals, magazine/newspaper articles, and books. The student must look for sources outside the classroom text.

## **ANTHROPOLOGY 2**

- A. Generate an annotated bibliography of anthropological literature pertaining to the ethnography of modern France.
- B. Write an essay as a critical review of anthropological literature pertaining to modern France by utilizing a total of five sources including the book "Social Change in Modern France: Towards a Cultural Anthropology of the Fifth Republic" with particular emphasis on the social issues of modern France.
- C. The essay is to meet the highest standards of a community college and will include, but not be limited to, an introduction, a historical overview of the subject, the critical assessment, a conclusion, and an annotated bibliography. Supporting materials in the form of pictures, tables, charts, figures, etc. are to be included as appropriate.
- D. The assignment will be published on a website and will include the essay along with all supportive images.

## **APPLIED ART and DESIGN 90**

In each of the 4 regular class projects (Banner, Flexible Messaging Area, Tool, and Final Website), the student will increase attention to design, typography, timing, sequencing, and movement by the following:

- 1. Adding technical elements where appropriate to the design.
- 2. Exploring how Flash is used on the web, including corporate business and artistic applications.
- 3. Analyzing and documenting sites and project resources including photos, sound, and new Flash techniques.
- 4. Presenting projects during class critique.
- 5. Presenting new design and technical elements in class demonstrations.
- 6. Providing links to Flash sites on Blackboard.
- 7. Incorporating all class projects, research, and exploration of additional technical elements into the design and implementation of the professional website for an existing business.

## **ART 10**

- A. Write a critical review of the pop art show at the Crocker Art Museum, which requires a visit to the museum.
- B. A critical review, in the form of a report, is to meet the standards of a community college and will include an introduction, overview of artists, a critical assessment, a conclusion, and a reference list.

## **ART 10**

The student will write a research paper of the highest academic standards, suitable for presentation to a college class, along with accompanying images (lecture format), on the well established contemporary artist Elizabeth Murray. The research paper, in the form of a lecture, will cover biographical information on the artist, as well as the historical context for her work, in addition to an analysis of the formal qualities of the artist's paintings and any other information pertinent to presenting a thorough understanding of the artist and her work. Supporting visual materials will include digital images, which may be in the form of portrait(s) of the artist, images of her paintings, and

artworks by other established artists that help to provide a context for her work. Supporting research materials will include quotes by the artist, magazine and newspaper reviews, and other publications that discuss the artist's work, as well as any available video documentation of the artist. The paper will include an introduction, a brief biography, and discussion of the artist's process and an analysis of her work, a historical context, a conclusion, and a list of references. The student will also attend two art lectures outside the classroom in a gallery or museum setting and write a discussion of the experiences.

### **ASTRONOMY 25**

There is only one assignment synthesized from the following two components:

A. Write a critical review of Julian Barbour's book "The End of Time – The Next Revolution in Physics" with particular emphasis on the overall philosophical and physical interpretation of the large-scale structure of the Universe and their relationship to the "classical" concepts of space and time.

B. The critical review, in the form of a report, is to meet the highest standards of a community college and will include, but not be limited to, an abstract, an introduction, a historical overview of the subject, the critical assessment, a conclusion, and a reference list. Supporting materials in the form of tables, charts, figures, etc. are to be included as appropriate.

### **BIOLOGICAL SCIENCES 1**

The first assignment is to learn to perform a database search in a research library (at UC Davis), and to find the original publications summarizing history of the impact of Game Theory on the field of sociobiology, as well as specific research publications in behavioral ecology and animal behavior that utilize this model to explain evolutionary stable strategies in animal systems.

The second assignment is to produce a review paper/manuscript in CBE format summarizing the literature search described above.

The third assignment is to develop a PowerPoint presentation summarizing the project, and present it to Sierra College Science Club at the end of the semester.

### **BIOLOGICAL SCIENCES 2**

1. An experiment to study the effects of soil's pH and nutrients on hydrangea flower colors.
2. A detailed scientific report paper on the result of the experiment.
3. A detailed scientific research paper on the mechanism of flower colors.
4. A PowerPoint presentation of the research and the experiment's results.

### **BIOLOGICAL SCIENCES 2**

Assignment 1: Student will research ephedrine, extraction methods, data collection and reporting methods, and professional presentation methods.

Assignment 2: Student will perform a chemical extraction of ephedrine, a secondary metabolite, from plant material. The data will be collected and reported in a 5-7page full lab report.

Assignment 3: Student will present said information in the form of a PowerPoint presentation to the Botany class.

### **BIOLOGICAL SCIENCES 2**

1. An experiment to study the effects of different variables on the propagation of blue indigo.
2. A detailed scientific report paper on the result of the experiment.
3. A detailed scientific research paper on the mechanism of flower growth.
4. A PowerPoint presentation of the research and the experiment's results.

### **BIOLOGICAL SCIENCES 3**

One assignment will be presented in two parts:

- 1) A PowerPoint and oral presentation with an educational explanation of the excretory system will be presented to a public audience. This presentation exhibits responsibilities above and beyond the average student and proves leadership capabilities.
- 2) An extensive amount of literary research will help produce a detailed written report. Contents of the report will meet the highest standards of a community college and will include an introduction of the excretory system, development of the system, general anatomy, accessory organs, function, how kidneys rid the body of waste, the implications of when kidneys cannot rid the body of waste, and a brief discussion of the common diseases of kidney.

### **BIOLOGICAL SCIENCES 3**

1. An extensive analysis of a prominent problem currently facing scientists. The research will focus on the fish eradication project currently affecting the community of Portola in Plumas County. Within the past few, months, Lake Davis has been re-inundated with a predatory, non-native fish called the Northern Pike (*Esox lucius*). Through an examination of the immediate problem and projected treatments, information gained from this evaluation will reinforce the important principals discussed in class. In addition, a field trip will be taken to fully comprehend this disaster and progress of current treatment. This activity will involve research and direct dialogue with Fish and Game officials, thus assisting the student in mastering zoological related concepts through interactive learning.
2. A high-quality literary research paper discussing a current topic facing Zoologists and a PowerPoint Presentation of the project in class. The written paper and PowerPoint presentation will include a breakdown of the specific causes and possible outcomes associated with the Lake Davis eradication project. Additionally, information about the potential environmental and economical impact from this event will be examined and discussed.

### **BIOLOGICAL SCIENCES 10**

The student will complete a college-level report that includes information on the general history of Clover Valley and the ecological value of the site. She will also discuss in the report the ecological and social value of green spaces within cities and how those green spaces are important to wildlife and plants. She will conduct a nonbiased evaluation of the site proposals both from the proposed developers of the site, as well as, the

proposals of those who wish to preserve the site. After conducting an evaluation of both plans, she will discuss the pros and cons of each and if neither plan appears to be in the best interests of the stakeholders of Rocklin, California, then she will propose her own alternative for the site. Finally, she will discuss how small scale changes to our environment, such as the one at the Clover Valley site, can have long term implications for the diversity of life on our planet especially as the human population increases. The final report will include sections covering each of the areas above and will include information from primary literature sources, newspapers and interviews with stakeholders involved in the project.

### **BIOLOGICAL SCIENCES 10**

Complete a research paper that will focus on no less than three politically unstable areas (not only defined by political boundaries i.e. Dominican Republic also defined by region i.e. the Darfur Region). The paper will review how that political instability can have a detrimental effect on the environment i.e. reckless use of environmental resources during incidences of fighting and/or how poor environmental conditions can increase the probability of political instability i.e. people are upset because they can not find fuel, wood, or clean water. The project will also seek to determine how the two are related i.e. did the instability cause the environmental degradation or vice versa? Next, the student will compare those unstable regions with at least one politically stable region. She will examine how the environmental conditions of the stable country differ from those of an unstable country. The student will use primary literature sources to complete this project and will look into other sources of material i.e. testimony, journals, etc.

### **BUSINESS 49**

To gain a greater understanding of the law, specifically Search and Seizure Laws, student will research in-depth the U.S. Constitution outside of the classroom, spend a day on the job with a law enforcement officer, and interview law enforcement officers and citizens. Student will then write a 28-page critical review of the Fourth Amendment Search and Seizure protections by analyzing documents and cases directly related to the topic, evaluating the ethical standard for each outcome in the case, and utilizing information gained by interviews and on the job experiences. Student will present the research to a classroom of peers and the paper will be published on the Sierra College's Law Club website.

### **BUSINESS 49**

Student will write a critical review of the U.S. Supreme Court opinion in Massachusetts v. EPA with particular emphasis on the impact on the Agency's regulatory authority over the automobile industry. Student will review the legal arguments of the opposing parties, the legal considerations raised by the Justices in arriving at the Court's decision, and the dissenting opinions.

The written report will meet the highest standard of excellence at the community college and will include an abstract, an introduction, an overview of the EPA's rule-making authority, a critical assessment of its application in the environmental impact, a

conclusion, and a bibliography. Supporting materials in the form of statistical tables will be included as appropriate.

#### **BUSINESS 49**

1. Write a critical review of Kantian and Utilitarian theories of ethics, and the extent to which they are the basis for laws governing the rights of gays to marry in the United States.
2. The written report will meet the highest standard of excellence at the community college and will include an abstract, an introduction, a philosophical overview of ethics, a critical assessment of its application in the laws in U.S., a conclusion, and a bibliography. Supporting materials in the form of statistical tables will be included as appropriate.

#### **BUSINESS 49**

1. Use primary source material and case studies to write and present a critical review of the concept of human rights in labor laws, with particular emphasis on diamond-mining in Africa and coal-mining in the U.S.A.
2. The written report will meet the highest standard of excellence at the community college and will include an abstract, an introduction, a philosophical overview of ethics, a critical assessment of its application in the laws in U.S., a conclusion, and a bibliography. Supporting materials in the form of statistical tables will be included as appropriate.

#### **BUSINESS 49**

1. The student will be expected to participate in class discussions at a higher level which means that she will take part in all discussions but not to the point that it hinders other students' learning experiences.
2. Student will write a term paper consisting of 20-25 pages that will demonstrate in detail the knowledge she gains from her research. Student will write a paper on an act of Congress that resulted in a significant contribution to society. She will explain the subject matter, its contribution, and most importantly, the process that Congress followed in order to collaborate and reach a decision. Furthermore, the student is to describe how the information provided by the contributing agencies, associations, and various other groups influenced the decision reached by Congress.
3. The student will access various websites which publish the many acts passed by Congress. Additionally she will be researching contributing parties whose information and knowledge influenced the decision reached by Congress. Since she will have to explain how Congress functions in order to make the decisions so vital to society she will also have to research Congress itself. The student is expected to demonstrate knowledge of congressional practices by explaining the processes which resulted in the specific set she chooses to report on.

#### **CHEMISTRY 2A**

This Honors Contract will include two assignments.

1. Two written reviews (3-4 pages each) on topics within the overall scope of sustainability demonstrating the highest standards of community college education.

Each written review will contain an abstract, introduction, discussion, conclusion and works cited page containing at least one scientific journal article, formatted to APA standards. Each review will contain graphs, tables, figures and equations as necessary to adequately convey pertinent information. These reviews will incorporate key course concepts and will be created around primary source materials such as journal articles and professional interviews. The use of chemistry concepts to explain a technological, social and political topic will increase student awareness of chemistry in daily life.

2. A multimedia oral presentation will be organized from the previous reviews and presented to an audience of peers. This presentation will allow the student to communicate science topics in the field of chemistry and punctuate the pertinent details to other chemistry students. Finally, a question/answer session will stimulate improvisational critical thinking.

### **CHEMISTRY 5**

The student will have a few assignments in order to successfully complete the Honors Project:

1. Perform a literature review of experimental methods used to determine hydrocarbon levels in soil as well as any masking requirements for the additional substances which may interfere with the study.
2. Develop an experimental procedure for the accurate and precise measurement of the concentration hydrocarbons in soil. Proper design of controls will be essential.
3. Collect samples with proper documentation and then perform the actual experimental analysis of the samples.
4. Analyze the results of the experimental study including a full statistical analysis of the results validity.
5. Write up a formal research paper of the project (as if it were to be published) that meets the highest standard of a community college and will include an abstract, an introduction, the experimental procedure, the results, a discussion of the results with complete statistical analysis of the results validity, a conclusion, and a reference list. Supporting materials in the form of tables, charts, figures, etc. are to be included as appropriate.

### **CHEMISTRY 12A**

As well as doing the normal work that non-honors students do in the laboratory, the honors student will also perform some further, more advanced techniques such as 2D-NMR, <sup>13</sup>C-NMR, UV/Vis Spectroscopy, HPLC, Polarimeter, GC, etc. For example when the honors student makes the molecule Isopentyl Acetate (Banana Oil) they will do the following extra characterization: (a) a GC Chromatograph and a <sup>13</sup>C-NMR Spectrum. These spectra will have a written evaluation and be turned in as part of the experiments report. Non-honors students will only characterize the molecule via H-NMR spectroscopy, boiling point and IR Spectroscopy (honors students will also do this normal characterization in addition to the extra characterization listed above). Other experiments will have extra characterization similar to this example.

PLUS ONE OF THE FOLLOWING OPTIONS:

A. The student will also try to modify or come up with at least three “Green” Chemistry experiments. These will be either new experiment that they research (Journal of Chemical Education, Web, etc.) and perform or modifying current experiments already preformed. Formal reports, that could be used by other introductory organic chemistry students to repeat the experiments in the future, will be prepared.

B. The student will attempt at least three additional experiments. The experiments to choose from are (a) Spearmint and Caraway Oil: How stereochemistry effects smell, (b) Ethanol synthesis from sucrose, (c) Carbene Chemistry using a Phase-Transfer Catalysis, (d) Preparation of Soap, (e) Aqueous based Organozinc reactions and (f) Insect Repellent "Off" active ingredient (DEET) synthesis. These are extra experiments that the non-honors students will not perform. Formal reports that may be submitted to a peer review journal for publication consideration will be prepared.

C. As well, the student will be working with the computational chemistry' program Spartan. The maker of Spartan has given us 45-day free trial copies of the software. This is a very powerful program used to predict the structure and reactivity of molecules. Three studies will be done with the software and formal reports will be prepared. The three studies are (a) Conformational analysis of Organic molecules: Local minima, (b) Cycloalkane Conformations and (c) Heats of Formation of Isomers. These are extra experiments that the non-honors students will not perform.

D. The student will write up a crime scene investigation portfolio. This folder will consist of information pertaining to the investigative techniques and present them in the most appropriate form such as diagrams, pictures, maps, and timelines. The crime scene investigation study will involve gathering data from credible sources such as federal, state and local allied law enforcement agencies.

### **CHEMISTRY 12B**

There are several students taking this course for Honors credit that will be working as a cohort. The students will have three types of assignments. They will be Oral presentations, Formal Reports, and quizzes. A group of students will meet with the instructor each week and one of them will introduce a topic for the day as an oral presentation (will have been assigned to the student the week before). The presenting student will also turn in a formal report of this topic one week later. The other students will take notes and we will work on problems that involve these concepts. There will be periodic quizzes on material from past sessions.

### **COMMUNICATION STUDIES 2**

Student will be assisting the instructor with class handouts and helping lead class discussions.

Student will be required to participate in all class discussions.

Student will be required to “time” all classmates’ speeches.

Student will take extensive notes during class that will be typed and turned in at the end of the semester. Student will give briefings to the class about the previous week, thus

improving her speech and communication at a higher level. Student will also update absent students of what went on in the class.

Student will observe a professional speaker giving a live talk outside of class. Student will write a two-page paper explaining who the speaker was, where and when the talk was given, how long the talk was, what the title and topic was, and how large the audience was. Student will report on the content of the speech including the introduction, transitions, major points, and ending. She will offer her thoughts on the delivery of the presentation including eye contact, facial gestures, physical movement, rate and volume of voice, handling of notes, enunciation, vocabulary, dress and non-words.

Student will attend two Toastmasters meetings. She will give a two page paper review on her experiences and share it with the class.

Student will give an oral presentation, using self-generated PowerPoint slides, videotape the presentation, and write a two-page self-evaluation paper on her introduction, body, ending, delivery, volume, rate, gestures, non-words, etc.

### **COMMUNICATION STUDIES 2**

1. The student will plan and prepare a class discussion and/or activity that will take approx. 30 minutes of class time. The activity will be centered on fallacies in argument. The activity will enrich the student's understanding of fallacies in argument while offering the student experience in research and teaching in a classroom setting among peers.
2. The student will plan and prepare research to participate in one extra debate during the semester. This debate may be an impromptu debate partnered with a fellow student. This will offer an opportunity to extend and practice skills in debating techniques and prepare the student to think and plan quickly in speaking situations.
3. The student will participate in a community service project to judge a high school speech contest. If no community experience opportunity is available, the student will attend another section of COMS 2 either at Sierra College or CSUS to present discussion and/or activity for another group of students.

### **COMMUNICATION STUDIES 8**

1. The student will read 3 Communication Studies scholarly journal articles with an emphasis on the "dark side" of interpersonal communication.
2. The student will write 3 essays critically analyzing the articles. The essays will include the following components: a content review to demonstrate understanding of the information in the article, a critical analysis of the ideas presented in the article, and a discussion of possible application of the theories/concepts including examples to illustrate the practicality of the theories.
3. The student will submit a final report that includes a summary of information and a critique of the process. All work will be held to the highest standards of college writing.

### **COMPUTER INFORMATION SYSTEMS 80**

Using the provided case study student will:

1. Write an in-depth business report discussing any assumptions student has made about the case and the key elements of the case. Additionally, what features did the student add to make the worksheets more functional? User friendly?
2. Provide a printout of each professionally formatted, completed worksheet, including charts and pivot tables. Provide a printout of each worksheet's formulas; provide an electronic working copy of the workbook that meets the criteria mentioned in the case scenario and specifications sections.
3. Write a brief business memo to the instructor discussing the results of each question posed in the case study.
4. Prepare an oral presentation using a presentation package and discussing the key features of the created workbook. Discuss how the workbook is beneficial to the user. What additional information should be included in the workbook to make it more useful?

### **ENGLISH 1A**

Student will write a critical analysis of Stephen Levitt's book, *Freakonomics*, which will be no less than 12 pages in length, plus addendum. This critical review, in the form of a report, must meet the highest standards of Sierra College. It will include the following at the very least: an introduction, a history of the author and his background, the critical assessment of the book, a conclusion, and a reference list.

In order to help the student further refine her own skills in the area of critical analysis and composition, the student will also complete 3 reviews of her peer's papers for each of the four paper assignments in the course (the other students are only required to complete 1 peer review per paper assignment).

### **ENGLISH 1A**

1. Read Lolita and the "Lolita" section of Reading Lolita in Tehran. 1 page summary of each reading is due the meeting before Thanksgiving break.
2. Research, read, and write 1 page summary of a scholarly article regarding the role of women in Lolita. 1 page summary is due the meeting before Thanksgiving break.
3. Final Project: 3 page report analyzing the effectiveness of Nafisi's use of Lolita to highlight cultural aspects of women living and learning in Iran. Incorporate scholarly article information. 5-10 minute oral presentation presenting critical review. Supporting materials in the form of visual aids and photographs are to be included as appropriate. The critical review, both written and oral, are to meet the highest standards of a community college and will include an introduction, a brief historical overview of the subject, a critical assessment, a conclusion, and a Works Cited page.

### **ENGLISH 1A**

Student will read Jane Austen's novel *Pride and Prejudice* and write a lengthy literary analysis incorporating literary criticism and research with a particular emphasis on the different social styles of the five sisters as opposed to historical standards for that period. Student will conduct extensive research on the lifestyles and ideals of women in mid century Britain and compare the roles of the characters in the book to the standards of behavior for that time, making sure to consider literary reviews while researching. The

literary analysis is to meet the highest standards of Community College and will include an introduction, a body which focuses on the roles of characters vs. social restraints and incorporates outside literary criticism, including consideration of literary reviews, a conclusion, and a separate works cited list utilizing MLA documentation in which at least three outside sources must be cited.

### **ENGLISH 30A**

After reading the Paine texts and performing outside research, the student will demonstrate greater understanding of the period and texts we've studied in the class by writing an analytical, thesis-driven essay that uses multiple sources to argue a clear claim. The student's additional reading is primary source material, which he will compare to the interpretations of modern day political thinkers. All research will be documented according to MLA method.

### **ENGLISH 30A**

After reading Nathaniel Philbrick's *Mayflower*, the student will demonstrate greater understanding of the period and texts we've studied in the class by writing an analytical, thesis-driven essay that uses multiple sources in which he explores the effects of clashes between the English settlers and the Native American tribes. Although the additional reading the student will be doing is not primary source material, he will be comparing his outside reading (the Philbrick book) to the primary source material (excerpts by Bradford, Winthrop, Rowlandson and others) that we have read in the class. Student will do research as appropriate to learn more about King Phillip's War and the ways that interactions between native populations and settlers influenced the political landscape of the colonies. All research will be documented according to MLA method.

### **HISTORY 17B**

The student will complete a research paper exploring George Armstrong Custer's culpability in the military disaster at the Battle of Little Bighorn on June 25, 1876. The student will research Custer's military and personal background, in addition to examining his leadership of the Seventh Cavalry in the years leading up to the Battle of Little Bighorn. The student will examine and evaluate both primary and secondary sources in developing an interpretation answering his guiding question: Is the consensus among historians regarding Custer's culpability justified based upon the available evidence? In developing an interpretation of this topic, the student will develop a greater understanding of the era, military procedures, Native American military strategies, and Custer's background. The student will develop an 8-10 page research paper, with appropriate footnotes and appendices.

### **HISTORY 17B**

Race and racism have been important aspects of American history, but they have not always been defined or experienced in the same way in all places and in all eras. On the night of October 2, 1904, white vigilantes abducted Catholic orphans that just arrived from New York City who were being placed with Mexican families in the Arizona

mining communities of Clifton and Morenci. This was an episode about the differing perceptions of race and class in America.

Discuss this event by beginning with an analysis of the racial and class lines in New York City and a description of the conditions of the city's poor children.

How did the Protestant and Catholic orphan organizations differ in their handling of these children? Then describe the "border culture" of the Mexicans living and working in Clifton and Morenci. Discuss the different status of Mexican workers in Clifton and Morenci as it related to their work and describe the lives of their wives. Why did the Mexican families adopt these children? Then discuss the Arizona mining community as a whole in terms of race and class. How were Mexicans maligned throughout this drama and how did their status change in Clifton and Morenci? What was the outcome of the struggle? What does this tell us about race and racism in America?

As these questions are developed throughout the book and as you develop your understanding of this episode in American history, analyze five of the primary documents used by the historian Linda Gordon to make her arguments and reach her conclusions.

### **MATH 10**

Student will create 15-20 problems pertaining to the course that range in difficulty from moderate to very challenging. Each of these problems will employ one or more problem solving strategies taught in the class. In doing so, the student will gain a greater understanding of the different strategies that may be used to solve myriad problems. Student will present the problems at the Sierra College Math Colloquium and explain how he was able to make the problems that are presented.

### **MATH 13**

Student will conduct a statistical analysis of the given names of children enrolled in Twin Ridges Home Study Charter School, a California Public K-8 Charter School with an enrollment of 193, serving Nevada, Sidra, Placer and Yuba Counties, compared with the given names of students enrolled with the Yuba River Charter School, a Waldorf-inspired California public K-8 Charter School with an enrollment of approximately 200 students that primarily reside in Nevada County. Analysis will be from enrollment and attendance data from Fall 2002 -Fall 2005. The following question will be answered: Are there more students with Biblical/traditional names in Home Study such as John, Mary, Joshua, Jordan, Michael vs. the non-traditional names that may be more popular in a Waldorf or non-traditional program such as Fiona, Merlin, Sage, Forest.

There are three assignments in this project:

1. Collect enrollment data of the given names of students in Home Study and Yuba River Charter Schools with the assistance of Nevada County QSS/Pertaine attendance reporting system and employees of the above schools.
2. Analyze the data using techniques learned in the Math 13 course.
3. Formulate and test hypotheses and present the data in report form to the class.

### **MATH 13**

In this project, the student will first collect data on currency conversions: Japan Yen, U.K. Pound, and U.S. Dollar from a banking source. Then the student will analyze the

data by making graphs of the various exchange rates using statistical methodology and identify dates and events which affect the rates. Finally, the student will formulate and test hypotheses regarding currency exchange rates using statistical methods which he/she has learned in the course. Student will present the conclusions in class, hoping they will be useful in predicting future exchange rates for banks.

### **MATH 13**

The student will use statistical methods to determine gender/sex proportions for babies born in the local community during the past twelve months (2004-2005) and to explore the accuracy of birth rates, discover trends, and make comparisons at a national level. Student will collect data from personnel at the Educational Services Department of the local hospital, along with additional reference data used for comparison purposes that will be collected from online and library resources. Student will create a hypothesis and then analyze the data using techniques that are explained in the course. The student will then support or reject the hypothesis and present a report to the class.

### **MATH 30**

In this course, both circular (trigonometric) functions and hyperbolic functions are investigated as they relate to the calculus. Regardless of any text employed in the support of the course, the acknowledgment of the relationship between these 2 categories of functions is fundamentally suppressed. With guidance from the instructor, the student will investigate and develop a relationship between hyperbolic and circular functions. This investigation will NOT merely relate similarities between familiar identities of circular or trigonometric functions with hyperbolic functions, but rather investigate and verify more intimate relationships (such as  $\cos y = \cosh iy$ ) involving Euler's Identity.

Student will also maximize the deflection angle between the normal and radical vectors of an ellipse with center at the origin. She will generate the geometric pictures that illustrate what she is trying to accomplish as well as the different calculus used in finding the maximum deflection angle.

Student will complete the project outlined in the text on page 269 which involves the student discovering Taylor Polynomials and their approximation "power." She will generate what the coefficients of a Taylor Polynomial must be and use such polynomials to approximate specific non-algebraic functions as well as numerical values.

Student must earn a grade of no less than "A" in the course and exhibit excellence in the completion of the previously mentioned projects.

### **MATH 30**

Student will complete selected additional assignments from the textbook for the class and additional assignments from other Calculus Texts. Student will complete a written project from the class text that directs the student to research the origins of calculus, including the use of primary sources. Student will give an oral presentation of the written project the class.

### **MATH 30**

1. Historical Research Paper: The student will write a historical research paper in the field of mathematics. The student will pick their topic by the end of the fourth week of classes. After choosing a topic, the student will then seek information related to this topic using sources such as historical books, internet articles or mathematical journals. The paper will describe the historical event/discovery that took place and its implications to the field of mathematics. The student will turn in their historical research paper by March 2, 2007.
2. Application/Discovery Problem: The student will pick a problem from a list specified by the instructor or will be cleared by the instructor as an application problem relating to Calculus I curriculum. The problem will be an extension or application of the concepts covered in the curriculum. The student will complete the problem, write up the solution and present to the instructor and other honors students by April 6, 2007.
3. Examination of Current Research: The student will find a research article of interest to them from an undergraduate research journal or a research magazine. The student will pick their research article by April 6, 2007. In their synopsis the student will demonstrate an understanding of the article as well as insight into the research topic, the synopsis will be turned in by May 4, 2007.

### **MATH 31**

1. The student will assist with the implementation of the Math 31 Lab which officially runs from 10-12 each Friday. The student will be responsible for aiding students in the completion of these labs merely from 10 -11 am each Friday (due to a conflict in time for this student's enrollment in Math31).
2. The student will develop both the solution to the logistic differential equation as well as providing to the class (via a presentation) this derivation. The end result of such a presentation is two-fold: peer students understand the validity of this mathematical model relative to the underlying physical assumptions, and the honors student both exhibits mastery of the underlying concepts as well as providing instruction to his peers.
3. In this course, both circular (trigonometric) functions and hyperbolic functions are investigated as they relate to the calculus. Regardless of any text employed in the support of this course, the acknowledgement of the RELATIONSHIP between these two categories of functions is fundamentally suppressed. With guidance from the instructor, the student will investigate and develop a relationship between hyperbolic and circular functions. This investigation will NOT merely relate similarities between familiar identities of circular or trigonometric functions with hyperbolic functions, but rather investigate and verify more intimate relationships (such as  $\cos y = \cosh iy$ ) involving Euler's Identity.

### **MATH 31**

- 1a) The student will study parametric equations in class. One famous example of parametric equations in computer-aided designs is the Bezier curve. The students will write a 1 -2 page historical account of Pierre Bezier and how Bezier curves are used today.

1b) The student will learn how to graph Bezier curves given 4 control points, and construct their own Bezier curves and combinations of Bezier curves producing loops, some alphabet letters, and other shapes.

2a) The student will research how Newton discovered the Binomial series. Student will write a 1 -2 page historical paper on the events surrounding his discovery.

2b) The student will then write a report detailing the mathematics behind Newton's derivation. This will include a mathematical discussion of why Newton's version is equivalent to the Binomial Series in the textbook, and should explain, mathematically, how Newton was able to verify his suspicions. The student will then present this report to the class.

c) After studying Taylor polynomials in class, the student will be able to find Taylor polynomials and to estimate function values using Taylor polynomials. These are used frequently in physics to simplify the study of certain functions. The student will analyze Planck's Law for expressing the energy at different wavelengths emitted from blackbody systems. Student will need to use L'Hospital's rule and Taylor Polynomials then to compare Planck's Law to the earlier Rayleigh-Jean Law. Student will graph the relationship between the energy density of blackbody radiation and the temperature of stars using stars such as Betelgeuse, Procyon, Sirius, and our sun. Student will present the results of the derivations of the Taylor polynomials and the graphs to the Math 31 class.

### **MATH 32**

Student will investigate the concepts of a traditional third semester calculus course at a level beyond that of her peers. Specifically, she will apply the concepts of the traditional mathematical perspective to the physical sciences through completing guided applied projects. This will not be a sequence of abstract projects, rather a collection of physically meaningful projects applying the concepts of multivariable calculus. The four projects are listed below:

1. One topic of study in third semester calculus involves the investigation of vector valued functions and motion in three-space. This first project will extend our concept of vector valued functions into the proofs (with a bit of guidance) of Kepler's 2nd and 3rd Laws of motion. These Laws of Motion are directly applicable to the study of vector valued functions, which is a solid component of this course. This component of the project is outlined in detail on pages 916-917 of the text.
2. Another topic of this course is the study of functions of several variables. In this study we investigate mathematical means of the optimization of physical quantities. In particular, we employ the second derivatives test as well as the use of Lagrange Multipliers. This second project will derive the velocity attained after multiple stages of jettisoning of rocket propulsion units. In addition, the student will use Lagrange Multipliers to minimize the total mass of the individual rocket engines subject to given constraints concerning the desired velocity to reach orbit is attained. This project is outlined in detail on pages 1008-1009 of the text.
3. Yet another topic of interest in calculus III is triple integrals. A rather contrived, but nevertheless illustrative, employment of this mathematical concept involves a race of various mathematical objects travelling down an inclined plane. The derivation of both the moment of inertia and the velocity' of four objects travelling down this

inclined plane will be generated. In addition, the travel time to reach the bottom of this inclined plane will be discovered by solving an appropriate differential equation. This particular project is outlined on pages 1075-1076 in the text.

4. Finally, a fourth, but perhaps the most important, concept of the course is the vector calculus. The student will investigate the sequence of events occurring in the operation of a four-cylinder internal combustion engine. Specifically, a mathematical model will be created by the student to represent the work done on the piston during one full cycle for such an engine.

### **MATH 33**

- i) Student will use differential equations to prove that a curve that has the reflective quality of a conic section is indeed a conic section. He will also use a higher order differential equation to describe the displacement of a rotating shaft at all points on that shaft. For the latter, he will discuss the subtleties of the components of his solution and how they relate to the corresponding physical phenomenon.
- ii) Student will investigate two very abstract notions of Linear Algebra: describing a very special collection of subspaces of a vector space (I will have student consider specific vector spaces such as a four dimensional space, a particular polynomial vector space, and a particular vector space of matrices, namely  $R^4$ ) and the necessity of the uniqueness of the zero element of a vector space (specifically, I will guide student to consider two elements of a vector space that have particular properties of a zero element and have him investigate the logical contradictions that must occur).

### **MUSIC 10**

1. Write an original piece of music following the A, B, A format.
2. The piece should be at least 32 measures and must comply with the traditional rules of music composition.

### **MUSIC 46**

1. The student will complete research from credible sources to identify the influence a selected musician has had on the development/history of Jazz Music.
2. The student will compose a high quality paper demonstrating greater understanding of the influence that the selected Jazz musician has had on the development/history of Jazz particularly pertaining to American Culture.
3. The student will attend one (1) concert of the Sacramento Philharmonic and will prove attendance with a ticket stub and program of the selected concert.

### **PHILOSOPHY 21**

1. Notes: Student will keep a record of notes while reading "Wittgenstein's Poker."
2. Student will develop an annotated bibliography on the meaning of "modernity."
3. Paper: Student will write an advanced community college level paper analyzing whether Popper or Wittgenstein should be classified as a modern philosopher.

### **PHILOSOPHY 21**

1. The student will complete a well researched paper that consists of an examination of Gabriel Marcel's The Philosophy of Existentialism in order to understand Christian

Existentialism as well as relevant works of Sartre to make an analytic comparison of Christian Existentialism to Secular Existentialism.

2. The student will identify and read the necessary primary sources, taking careful notes.
3. The student will look at two different critiques of modernity with issue from the same philosophical commitments, yet different perspectives, resulting in a much deeper, broader understanding of this aspect of philosophy.

### **PHILOSOPHY 21**

All of the following will be done in one assignment, which is a high quality paper:

1. Submit a high quality critical review of the book "Liberalism and the Limits of Justice" by Michael Sandel.
2. Carefully detail the relationship of the conceptions of justice and liberalism to their historic foundations in modernity.
3. Investigate social and political aspects of modernity which are not covered in class.

### **PHYSICS 4A**

The project consists of several assignments. These assignments are:

1. Experimentally verify the theoretical expression for the work required to lift a rope or chain.
2. Experimentally verify the theoretical expression for the force acting on the fixed end of a rope or chain while the free end undergoes free fall.
3. Develop the expression for reading of a spring balance when a rope or chain is falling freely on it. The expression will be experimentally verified, if suitable laboratory equipment is available.
4. Develop the theoretical expression for the capstan problem and then experimentally verify it. The capstan is used aboard ships to control a rope under great tension. The rope is wrapped around a fixed drum. A load on the rope pulls it with a force  $F$  and the sailor holds it with a much smaller force  $f$ .
5. Develop a model to describe the air resistance acting on a beach ball.
6. Develop model to describe the vibrational motion of a beam. Three beams of various materials will be studied in order to develop the model.
7. In addition, each student within the group will present the results of at least one (depending on their complexity) of the assignments in class in the form of a PowerPoint presentation.

### **PHYSICS 4B**

Student will work on the following problems:

1. Calculate the electric potential and the electric field due to two point charges  $+q$  and  $-q$  separated by a distance  $2a$  at an arbitrary point in space. Derive the approximate expression for the electric potential (to 3rd order) and the electric field (to 3rd order) far away from the charge configuration.
2. Calculate the electric potential due to three colinear charges at an arbitrary point in space. The charge in the middle of the configuration is  $-2q$  while the outer charges separated by  $2a$  have value  $+q$ . Derive the approximate expression for the electric potential (to 3rd order) far away from the configuration.

3. Expand the general expression of the electric potential due to a localized charge distribution in a series (to 3rd order) and compare the results to problems 1 and 2.
4. Derive the general expression for the electric field (to 3rd order) from the expression in the previous problem. Compare the results to problem 1. In addition, discuss the relevance and applicability of the results in problems 3 and 4.
5. Assuming that an external electric potential varies slightly in the region of a localized charged distribution, expand the potential in a Taylor series about a suitably chosen origin to second order. Use these results to analyze the force on a localized charge, the energy stored by a dipole, in an electric field, and the energy stored by a dipole in a field due to a dipole.

### **PHYSICS 4B**

Student will build a Paul type particle trap that can store macroscopic particles such as anthracene dust particles. Student will submit a report with figures and references detailing the process and results written at a level that could be published by a refereed journal.

### **PHYSICS 4B**

1. Student will use Simpson's rule to calculate the electrical potential due to a thin, uniformly charged, conducting ring of radius  $R$  for  $r > R$ . The electrical potential will be determined and plotted at points located within the plane of the ring. This calculation will be done in Excel.
2. Student will measure and plot the electrical potential of a uniformly conducting ring of radius  $R$  for  $r > R$  within the plane of the ring.
3. Student will compare the results of the calculation with the experimental results.

### **POLITICAL SCIENCE 1**

- A. Write a 9-10 page analytical paper of George Lakoff's journal "Metaphor, Morality, and Politics, Or Why Conservatives Have Left Liberals in the Dust" which focuses on two metaphorical models, "Strict Father Model" and "Nurturant Parent Model", (with corresponding conservative and liberal values that compliment each model), that provide a critical examination of why the conservatives and liberals in the United States of America think the way they do.
- B. The analytical paper is to meet the high academic standards of Sierra College and will include: an introduction; thesis statement; background information on the book; critical analysis of the journal, focusing on conservative and liberal ideologies and how they apply to our present society, including the 2008 presidential election; a conclusion; a footnotes page; and a Works Cited page (in MLA format). The student will also give a 20-minute PowerPoint presentation of the Analytical Paper.
- C. The 20-minute PowerPoint Presentation of the analytical paper will highlight and defend the student's critical analysis of the book.

### **POLITICAL SCIENCE 9**

Research and additional reading will be completed outside of the regular assigned coursework, specifically regarding the significance of the petroleum industry in the Middle East and the cartel behavior that is frequently demonstrated. A heightened

appreciation of the operation of the oil industry and its effects on political and economic processes will be achieved by reading about, examining data, and writing a ten to twelve page research paper related to the subject.

### **POLITICAL SCIENCE 16**

- A. Write a 9-10 page analytical paper of Robert Dahl's book "How Democratic is the U.S. Constitution" focusing on the philosophical ideas of our "Framers of the U.S. Constitution" and a critical analysis of the democratic nature of the U.S. Constitution, including our three branches of government, the legislative, executive, and judicial branches.
- B. The analytical paper is to meet the highest academic standards of Sierra College and will include: an introduction, thesis statement, background information on the book, critical analysis of the book, focusing on the philosophical ideas of the "Framers" and a critical analysis of the democratic nature of the U.S. Constitution, including our three branches of U.S. government, a conclusion, a footnotes page, and a Works Cited page (MLA format). The student will also give a 20-minute PowerPoint presentation of the Analytical Paper.
- C. The 20-minute PowerPoint Presentation of the analytical paper to the professor will highlight and defend the student's critical analysis of the book.

### **PSYCHOLOGY 3**

The student will generate appropriate questions and conduct a video interview of an individual who was involved underground in the hiding of Jews during WWII with an emphasis on how her values influenced her behavior to take potentially fatal risks for the benefit of others. She will also research literature on individuals who took risks by hiding Jews or were involved in the underground during WWII and draw correlations between their values and behavior.

Student will give a 20-30 minute in-class presentation using footage from her video and research to demonstrate how values can influence behavior. The student will also turn in a copy of the video interview, an outline of her research findings and lecture notes.

### **PSYCHOLOGY 3**

First, the student will access PsycArticles, ProQuest, and other scholarly databases to locate original, empirical and theoretical journal articles on social loafing. He will need to synthesize and critique the findings of the literature in order to demonstrate his ability to correctly use primary source material and to demonstrate greater understanding of the topic. Second, the student will turn in an outline, his PowerPoint presentation notes, and copies of the original research articles that he used to compile his presentation.

Third, the student will prepare and present a 20-minute PowerPoint lecture to the social psychology class that is clear, well-organized, and maintains the student interest. He will be prepared to answer questions and respond to student and instructor comments on the topic.

### **PSYCHOLOGY 40**

Student will read the following books and articles:

- The Psychological Needs of the U.S. Military Service Members and the Families: A Preliminary Report. American Psychological Association. 2007.
- “A Firsthand Report on the Wounds of War.” The Washington Post 27 Feb 2007.
- “Dead Man Walking.” Discover 23 Feb 2007. Mason, Michael P.
- Head Cases: Stories of Brain Injury and Its Aftermath. New York: Farrar, Straus & Giroux, 2008.
- “Blast-Related Traumatic Brain Injury.” The Journal of Neuropsychiatry & Clinical Neurosciences (2006).
- In an Instant: A Family’s Journey of Love and Healing. New York: Random House Trade Paperbacks, 2008.

Student will read the above mentioned primary source documents and popular press articles and case studies. She will compare popular press reports and scientific findings. Student will find two additional primary source articles from journals and read these articles.

Student will research at the Sac State Library in addition to the Sierra College library. Student will complete additional writing assignments or projects. Student will turn in a written report written in APA style and divided into three parts (Introduction, Body, and Conclusion) about her findings on the topic of TBI-signature wound of Iraq war. Student will use her research on TBI to create a presentation for the class. The student will attend a university lecture of her choice and subject.

### **PSYCHOLOGY 42**

There are two assignments that are composed of the following:

- A. Bi-weekly meetings will consist of the discussion of two or more chapters from the reading “The Empire of Chance: How Probability Changed Science and Everyday Life.” The student will submit 2 discussion topics per chapter (submitted in person or email at least 24 hours prior to each scheduled meeting). The topics should describe important content of the chapter and can include questions about the reading that the student would like to address. The discussion topics will guide the faculty/student meetings.
- B. Submit a college level review, in APA format, of “The Empire of Chance: How Probability Changed Science and Everyday Life” that will be composed of an abstract, review, and reference list. The completed paper will demonstrate an in-depth understanding of the historical origins of probability theory and statistics and their influence on the social sciences and other disciplines.

### **SOCIAL SCIENCE 10**

1. Student will interact in online class discussion at least 3 times per week.
2. Student will research the myth of the melting pot and write a 5-page research paper.
3. Student will attend 5 cultural events approved by the instructor. At least one event must take place off campus.
4. Student will complete five 2-3 page research papers on the cultural events she attended.

## **SOCIOLOGY 1**

There will be one assignment with the following components:

1. Gather sociological research from peer-reviewed sources regarding inequality in the American social class system.
2. Analyze that research using prominent sociological theories on systems of social stratification (including, but not limited to, functionalist theory and conflict theory).
3. Based on the analyses, devise a possible solution to the social problem of class inequality in American society.
4. Write a 10-15 page report (ASA format), complete with an abstract, introduction, review of previous research, analysis of findings using sociological theories, possible solutions to the problem, suggestions for further research, a conclusion, and a reference list. Supporting materials such as tables, charts, figures, etc. are to be included as appropriate as well. This report is to meet the highest standards of a community college.

### **SECTION III: Assessment Criteria**

#### **AGRICULTURE 200**

The assessment criteria are:

1. Was a poster presented in the AG 200 class as well as the Siena College Science Symposium?
2. Was a talk presented in the AG 200 class as well as the Sierra College Science Symposium?
3. Was the poster and talk on a level consistent with the highest standards of a lower division college investigative report including: objective, introduction, overview of the subject, results and literature cited? Materials such as photos, tables, charts, etc. should be included as appropriate.

#### **AGRICULTURE 203**

The assessment criteria are:

1. Was a poster presented in the AG 203 class as well as the Sierra College Science Symposium?
2. Was a talk presented in the AG 203 class as well as the Sierra College Science Symposium?
3. Was the poster and talk on a level consistent with the highest standards of a lower division college investigative report including: objective, introduction, overview of the subject, results and literature cited? Materials such as photos, tables, charts, etc. should be included as appropriate.

#### **ANTHROPOLOGY 1**

The assessment criteria are:

1. A report was provided by the last faculty/student meeting held in the week before finals week.
2. The report synthesizes material from both own observations of primate behavior and those observed in the field by primatologists with particular emphasis on how the dynamics of a captive environment may influence behavior.

3. The report is on a level consistent with the highest standards of a community college investigative report including, but not limited to, an introduction, the main body of the report, a conclusion, and a reference list. Supporting materials in the form of standard observation charts utilized in the field, tables/figures, etc., are to be included as appropriate.

### **ANTHROPOLOGY 2**

The assessment criteria are:

1. Student will submit a research paper of approximately 8-10 pages in length by or during the 14<sup>th</sup> week of the semester.
2. The research paper will examine, in an anthropological way, the relationship between superstition and cultural practices, and how this relationship affects public health.
3. The report will contain data generated by independent research, will adequately reference aforementioned data, and will synthesize and evaluate key anthropological themes and approaches regarding the cultural analysis of superstition and public health.

### **ANTHROPOLOGY 2**

The assessment criteria are:

1. A bibliography of a least 5 anthropological references pertaining to contemporary France and ethnography in France is submitted to be approved by the instructor.
2. The bibliography is converted into an annotated bibliography by adding clear and relevant summaries and notations below each reference.
3. A 10 page essay in the form of a critical review and synthesis of the reference materials is submitted in the form of a website. The URL will be forwarded to the instructor via email.
4. The review must analyze, synthesize, and apply anthropological concepts utilizing the approved sources as they relate to the modern social issues of France.
5. The essay must meet community college standards.

### **APPLIED ART and DESIGN 90**

1. Expanded class projects will be evaluated for inclusion of all base elements, additional elements, appropriateness for identified honors project target audience, and individual creativity.
2. Added rigor will be given in evaluation of visual and interactivity design.
3. Additional technical elements will be listed in each project and evaluated in terms of appropriate use in the project, incorporation into project design, implementation, and overall impact on the project.
4. Presentations to class will be evaluated on clarity, inclusion of examples, and demonstration of relationship to class project goals and objectives.

### **ART 10**

Assessment criteria are:

1. Must be submitted by the last student/faculty meeting the week before finals (December 1<sup>st</sup>).

2. Must be a scholarly level college paper.
3. Must include an introduction, overview of the participating artists, a critical assessment of the works as individual pieces and how they work as a group. The paper must center around the theme of how public relations are used in the advertising, presentation and interpretation of the show, the works and the artists represented. Also to be included are the possible roles and functions of art, the formal elements of art in the form of descriptions, and reference to artists in the show that have made significant contributions to the art world.

To receive a passing grade all of the above components must be accomplished. A draft of the paper will be submitted for review and comment. The finished paper will be proofed and corrected, and include proper citations for quotes and references.

### **ART 10**

The assessment criteria are:

1. Were the research paper and the lecture discussion papers provided by the last faculty/student meeting held in the week before finals week?
2. Did the research paper discuss the biography of Elizabeth Murray and thoroughly explain the historical context for her work, and did it provide formal analysis of her paintings, all with accompanying images?
3. Were a designated number of lectures, two, attended outside of class?
4. Was the research paper on a level consistent with the highest standards of college level investigative reporting including an introduction, biography, discussion and analysis of the work, a historical context, conclusion, and a list of references?

### **ASTRONOMY 25**

The assessment criteria are: 1) Was a report provided by the last faculty/student meeting held in the week before finals week? 2) Did the report discuss Julian Barbour's book "The End of Time – The Next Revolution in Physics" with particular emphasis on the overall philosophical and physical interpretation of the large-scale structure of the Universe and their relationship to "classical" concepts of space and time? 3) Was the report on a level consistent with the highest standards of a community college investigative report including, but not limited to, an abstract, an introduction, a historical overview of the subject, the main body of the report, a conclusion, and a reference list? Supporting materials in the form of tables, charts, figures, etc., are to be included as appropriate.

### **BIOLOGICAL SCIENCES 1**

1. The progress of library research will be evaluated during the regularly scheduled meetings throughout the semester.
2. The first draft of the paper should be submitted to the instructor by the 10<sup>th</sup> week of the semester. The paper should be written in the CBE format and include: abstract, introduction, history of the topic, examples of theoretical research papers on the topic, discussion, and reference list.
3. The final draft of the paper should be submitted to the instructor during the 15<sup>th</sup> week of the semester.

4. The PowerPoint presentation to the Science Club should be made by the 14<sup>th</sup> week of the semester.

### **BIOLOGICAL SCIENCES 2**

The student will be expected to write a 5-7 page paper complete with abstract, introduction, methods and materials, data presentation, discussion, conclusion and literature cited components. In addition, the student must have a minimum of 3 data tables and 3 figures in the paper. The student will also present a PowerPoint presentation to the rest of the class at the end of the semester. The PowerPoint presentation must have a minimum of 12 slides, each with text and graphics explaining the result of the experiment.

### **BIOLOGICAL SCIENCES 2**

Was a report completed by the final faculty student meeting?

Did it meet the required 5-7 pages and include; title, author, abstract, keywords, introduction, results, data tables, discussion, conclusion, acknowledgements, procedure, and references?

Was the report on the highest level of standards for a community college?

Was a 12 slide minimum PowerPoint presentation given to the class prior to the final student/faculty meeting?

Did it include vital information from the typed report and include background information on the chosen topic?

Was the presentation given at a level appropriate for a community college?

### **BIOLOGICAL SCIENCES 3**

1. Was the written report along with the PowerPoint presentation submitted by 29 November 2007, with minimal to no-errors?
2. Did the report discuss important Zoological principles associated with this biology class, and go beyond the scope of the class? Particular emphasis should be placed on the relationship between topics in class and research done at Lake Davis.
3. The student must provide adequate proof of a field trip taken to the Lake Davis.
4. Did the student turn in an outline, followed by a rough draft, and the final report?
5. If any assignment is not completed, the student will be dropped from the honors contract.
6. If the student completes the assignments, but has errors in more than 75%, the student will be dropped from the contract.
7. If the above criteria are met and the student earns a grade of B or higher in the course, then the student will receive the "honors" designation.

### **BIOLOGICAL SCIENCES 3**

The assessment criteria are:

1. Is a written report provided by 29 November 2007?
2. Is the written report indicative of extensive literature research? Is the format correct? Is the quality of work above and beyond community college standards?

3. Is the PowerPoint presentation well organized? Is it consistent with the topic material? Does the student exhibit good public-speaking skills? Did the presentation exhibit excellence in leadership and knowledge in the field?

### **BIOLOGICAL SCIENCES 10**

1. The report will be due by December 4<sup>th</sup> during the last student/faculty meeting.
2. The report will be evaluated for its completeness of the discussion of the history of the site, the ecological value of the site and the importance of green spaces in communities and for organisms. The report will also be evaluated for its completeness of the discussion of both proposed projects for the site, Did the student interview enough stakeholders to provide an assessment of both plans? Was the student able to remain unbiased in her discussion of the proposed projects? Did the student understand the impact of human populations on the environment?
3. Was the report well written? Is it at the standard of a report that could be presented to the City Council? Does it completely address each issue described above? Were the proper maps, figures, charts, etc. utilized when needed?

### **BIOLOGICAL SCIENCES 10**

1. The report will be due by December 4<sup>th</sup> during the last student/faculty meeting.
2. The report will contain an abstract, introduction, a critical evaluation of the subject and conclusions based upon her research.
3. Was the report well written? Does it completely address the issue? Did the student do an exhaustive search of the literature?

### **BUSINESS 49**

1. Was the report provided by the last faculty/student meeting held on December 13?
2. Did the report discuss the legal principles involved in government searches and seizures? Did the oral presentation effectively communicate the research findings?
3. Were the report and the oral presentation consistent with the highest standard of a community college research report, including an abstract, an introduction, an overview of constitutional principles and their application, a conclusion, and a bibliography?

### **BUSINESS 49**

1. Was the report provided by the last faculty/student meeting held on December 13?
2. Did the report discuss the U.S. Supreme Court's rationale and decision in Massachusetts v. EPA? Did the report discuss the extent to which this ruling will impact the automobile industry and the overall culture on global warming?
3. Was the report on a level consistent with the highest standards of a community college research report including an abstract, an introduction, a philosophical overview of ethics, an analysis of its application in laws governing abortion/criminal punishment, a conclusion, a bibliography, and any statistical data?

### **BUSINESS 49**

The assessment criteria are:

1. Was the report provided by the last faculty/student meeting held on December 12?

2. Did the report discuss Kantian and Utilitarian theories of ethics? Did the report discuss the extent to which these ethical theories inform U.S. laws, specifically laws relating to gays' rights to marriage?
3. Was the report on a level consistent with the highest standards of a community college research report including an abstract, an introduction, a philosophical overview of ethics, an analysis of its application in laws governing gays' right to marriage, a conclusion, a bibliography, and any statistical data?

### **BUSINESS 49**

1. Was the report provided by the last faculty/student meeting held on December 13?
2. Did the report discuss human rights principles in the context of diamond mining in Africa and coal mining in the U.S.A.? Did the oral presentation effectively communicate the research findings of human rights abuses and protections?
3. Was the report on a level consistent with the highest standards of a community college research report including an abstract, an introduction, a philosophical overview of ethics, an analysis of its application in laws governing abortion/criminal punishment, a conclusion, a bibliography, and any statistical data?

### **CHEMISTRY 2A**

Success of this Honors Contract will be evaluated by four criteria.

1. Punctual submission of two reviews (10/22/2007 and 11/19/2007).
2. Appropriate incorporation of several course concepts in each review to address and explain each topic in detail.
3. Each written review will display the highest standards of community college education including an abstract, introduction, discussion, conclusion and works cited page containing at least one peer reviewed journal article, formatted to APA standards to be critically reviewed by the instructor.
4. A well organized, understandable multimedia presentation addressed to an audience of peers. In addition, the student will be expected to respond to any questions asked by the audience in a question./answer session moderated by the instructor.

### **CHEMISTRY 5**

The assessment criteria are:

1. During biweekly meetings student will demonstrate progress of work by showing literature research, experimental design, data, calculations, outline of paper, and rough draft of paper.
2. Were the experiments performed properly using proper analytical techniques to insure the best possible accuracy and precision?
3. Was a research report provided in the last faculty/student meeting held prior to finals week?
4. Did the report include background information, experimental methods, results, discussion, conclusion, and references of the students study of hydrocarbon concentrations in soil on a level consistent with the highest standards of a community college? Supporting material including graphs, tables, figures, etc. are to be included where appropriate.

5. Did the data analysis include a complete statistical analysis of the validity of the results?

### **CHEMISTRY 12A**

The student must complete all of the extra characterization assigned and evaluated it thoroughly and correctly. If less than 100% of the characterization is not complete and it is not evaluated correctly 90% of the time, the student will not receive the honors designation.

PLUS ONE OF THE FOLLOWING, DEPENDING ON THE ASSIGNMENT OPTION:

- A. At least two "Green" Chemistry experiments and their reports must be submitted. If these reports are not turned in and of high quality the student will not receive the honors distinction.
- B. At least three additional chemistry experiments and their reports must be submitted. If these reports are not turned in and of high quality the student will not receive the honors distinction.
- C. At least three additional chemistry experiments using the Spartan software and their reports must be submitted. If these reports are not turned in and of high quality the student will not receive the honors distinction.
- D. The portfolio will consist of reports written by the student which will be presented every other week during the meeting time. If these reports are not turned in and of high quality the student will not receive the honors distinction.

### **CHEMISTRY 12A**

The assignment will be spread over the course of the semester, not one large project at the end. At each meeting (every other week) the student will present 10 exercises with solutions that they have typed up in PowerPoint. These will be problems that they have created themselves (no plagiarized questions) and the type of questions will be assigned by me. For example, a student will be asked to write 3 questions of increasing difficulty that demonstrates the ability to draw Lewis structures. These PowerPoint presentations will involve the use of PowerPoint, Chemical drawing programs and others. As well, the student will need to come up with one activity on a topic I'll assign to present for each meeting. Finally the student will need to come up with one demonstration on a topic I'll assign. The demonstrations will not have to be presented each meeting, but the details about the demonstration (material needed to be purchased, cost of materials, material to be made, etc.) needs to be given. The student will present just one of their demonstrations to the other honors students during the semester.

### **CHEMISTRY 12A**

Each meeting the student needs to have 10 exercises, one activity and one demonstration prepared. The exercises need to have questions that make sense with correct answers (75%+ will result in a passing grade for that assignment). The activity needs to be presentable and have all of its props prepared. The demonstration must be done in a way that is presentable to an audience of 40+ in a lecture style setting. One time during the semester if the assignment is not completed for the meeting then the student will be able to present the missing work the following meeting along with

that meeting's work. If it is not done at this point the student will be dropped from the honors contract.

If the student completes the assignments but has errors in more than 75% of the exercises, or the activities or demonstrations are riddled with errors (more than 75% incorrect) then student will receive an incomplete for that assignment. If more than one assignment is incomplete according to these criteria, then the student will be dropped from the contract.

If the above criteria is met and the student earns a grade of B or higher in the course then the student will receive the honors designation for the course.

### **CHEMISTRY 12B**

Each meeting the student that does the oral presentation will receive a passing grade for the presentation if they cover the topic fully and have minimal errors (75%+ will result in a passing grade for that assignment).

The student needs to get 75%+ on quizzes to pass them.

The student needs to turn in typed, well written formal reports with minimal errors (sloppy work will result in a non-passing grade).

The student will be allowed to only receive a non-passing grade on a maximum of two assignments. If the non-passing assignment is the formal report then they need to rewrite it and make it passing.

If the above criteria are met and the student earns a grade of B or higher in the course then the student will receive the honors designation for the course.

### **COMMUNICATION STUDIES 2**

The student will be given a rubric of expectations for each assignment. The expectations will be discussed prior to the assignment and the outcomes will be discussed after the completion of the assignment. Grading rubrics will be designed to assess the student's strengths and ways for improvement in the discipline. The rubrics will address skills in both the written (debate/presentation outlines) and oral presentation (oral debate) including strength of evidence and/or content of material, delivery techniques, ability to skillfully answer questions in debate, offer cross-exam, and organize materials in a clear fashion in oral presentation.

The student will give oral feedback to the professor of their own perceptions of their community service, evaluating the concepts of argumentation skills that were observed and experienced in the community experience, while focusing on the value of the experience in practical applications of argumentation theory in public speaking situations.

The professor will observe the student's class presentation and offer feedback to the student about their oral presentation skills, creativity of the activity/presentation, strength, clarity, and value of concepts presented, and audience response. The student and professor will discuss ideas for improvement in future presentation and strengths of student's skills in oral presentation.

### **COMMUNICATION STUDIES 8**

All work will be held to the highest standards of college writing. The student will be evaluated on understanding of the concepts, depth of analysis, and practical application

of ideas as well as organization, coherence, and clarity. Please see rubric for detailed criteria [instructor attached the rubric to the Honors Contract Proposal].

### **COMPUTER INFORMATION SYSTEMS 80**

1. Was the workbook designed as described in the case scenario, provided by the last student/faculty meeting held on 5/13/07, and did the project include all the requirements as described in the case deliverables section of the case study?
2. Worksheets will be designed to effectively track an employer's sales staff's expenses. Expense worksheets must be in Excel list form. To design the worksheets to specifications, student must use database functions, as well as other key functions and nested functions. In addition, student will need to demonstrate proficiency in the use of AutoFilters, Advanced Filters, Pivot Tables and charting tool to analyze the data.
3. Was the complete project on a level consistent with the highest standards of a community college business/CIS professional documentation package, to include both a technical and professionally designed flexible workbook (printed and electronic formats); and written and oral communications presentations discussing specific business questions and key features of this workbook and overall case study.

Documents must demonstrate business and technical writing skills and use proper professional business document formatting. For the Excel worksheet this will be done by creating a workbook template. Further, student will be required to create a functional Excel data entry form. To determine key information and provide analysis, the workbook must include nesting a VLOOKUP function inside an IF function. All worksheets must be tested for efficiency and accuracy of formulas and design. Presentation of project results must be done as a formal business presentation using proper business techniques and etiquette.

### **ENGLISH 1A**

Student's work will be graded A-F using a standard rubric for organization and form, with additional written comments indicating strengths and weaknesses in the work. Student will first create drafts, then, using feedback from me, improve her draft for submission in revision form. Her content will be judged on adequacy and meaningfulness, especially on the research's value and usefulness to her.

### **ENGLISH 1A**

1. Did the student complete the 1 page summary of Lolita, Reading, and the scholarly article by November 29<sup>th</sup>?
2. Did the student prepare a written and oral critical review exhibiting synthesis in analyzing Nafisi's use of Lolita to highlight the living and learning of women in Iran and was that critical review presented at the last student/faculty meeting?
3. Was the report on a level consistent with the highest standards of community college investigative report including, but not limited to, an introduction, a brief historical overview, the main body of the report, incorporation of the scholarly article, a conclusion, and a Works Cited page? Were visual aids incorporated as appropriate?

### **ENGLISH 1A**

1. Was a literary analysis essay provided by the last faculty/student meeting held November 30, 2006?
2. Did the literary analysis essay discuss Jane Austen's novel *Pride and Prejudice* with particular emphasis on historical and cultural perspectives on the roles of women in the novel, revealing the necessary historical context, analysis, and research? Did the research consider literary reviews and incorporate this work into the essay?
3. Was the literary analysis essay consistent with the highest standards of a community college and include an introduction, a body which focused on the roles of women and incorporate outside literary criticism, a conclusion, and a separate works cited list utilizing MLA documentation with at least three outside sources listed?
4. Did the literary analysis essay exemplify high writing standards according to the English department rubric and represent work earning a grade of "B" or higher?

### **ENGLISH 30A**

The student's paper will be graded according to college level essay standards, using a rubric that takes into account clarity of ideas, strength and persuasiveness of theses, appropriate support and development of claims and assertions, writing style and grammatical correctness. The assessment criteria will also take into account the student's level of understanding of Paine's religious views and the extent to which they were adopted by the Founding Fathers who drafted the Constitution. His paper will also be evaluated on its ability to synthesize the source material in a coherent exposition. Of course, the paper must be submitted on time, no later than Friday, December 8 (the Friday before Finals Week).

### **ENGLISH 30A**

The student's paper will be graded according to college level essay standards, using a rubric that takes into account clarity of ideas, strength and persuasiveness of thesis, appropriate support and development of claims and assertions, writing style and grammatical correctness. The assessment criteria will also take into account the student's level of understanding of Philbrick's thesis as well as his ability to synthesize the source material in a coherent exposition. Of course, the paper must be submitted on time, no later than Friday, December 8 (the Friday before Finals Week).

### **HISTORY 17B**

The instructor will provide the student with written and verbal assessment. Specifically, the instructor will evaluate the strength of the student's thesis statement, his explanation and evaluation of historical sources, appropriate use of evidence in supporting his argument, and use of proper bibliographic and footnote citations (Chicago Style).

### **HISTORY 17B**

Responses to the essay questions posed will be thoroughly developed in a high quality college level essay and will demonstrate clear understanding of the material. The essay

will sufficiently analyze the author's reconstruction of historical events and exhibit a knowledge of the process by which the author draws conclusions from primary sources.

### **MATH 10**

1. Each problem must be on par with the problems that are required of the class as a result of the normal curriculum.
2. Results of each problem will be graded for accuracy, completeness, and presentation.

### **MATH 13**

To determine if the Honors Contract is successful, the instructor will judge whether all of the following criteria were adequately satisfied or not:

1. Did the student use valid statistical techniques to collect data?
2. Did the student complete the analysis using the appropriate statistical techniques and were they applied in a valid manner?
3. Did the student formulate reasonable hypotheses and draw valid conclusions?
4. Was a meaningful report given to the class at its regularly scheduled meeting time on December 8 or 13?

### **MATH 30**

Student must earn an A in the regular course in order to get credit for the Honor's Project.

Two assessment criteria will be used:

1. The formal write-ups of the projects will indeed be at the college level. This includes organization, neatness of written presentation, and grammatical structure. The assessment will be on the basis of acceptable or not acceptable, as opposed to a graduated scale, such as a letter grade of A, B, C, etc.
2. The write-ups will certainly be assessed for the rigor to the mathematical presentation. Again, this will be evaluated on an acceptable or not acceptable basis.

### **MATH 30**

The assessment criteria are:

1. Student will maintain an average of 90% on quizzes and exams in regular course.
2. Complete all assigned projects within the agreed-upon time frame. Student will spend a minimum of two hours per week working on the assignments.
3. Complete the written report and submit to the instructor on the last day of class before the final (12/13/05). The written report will be written at a level consistent with the highest standards of a community college report. Content will be assessed by the instructor. The writing must be historically accurate and free of errors. Writing quality will be determined by the student consulting with an English professor at Sierra College.
4. Student must make an oral presentation of about 10 minutes in length to the class. The presentation will be clear, concise, and delivered in a professional manner. A visual aid will be utilized.

### **MATH 30**

The assessment criteria are as follows, each question will be answered as acceptable or not acceptable:

1. Historical Research Paper: Did the student describe, in moderate detail, a historical event, discovery or controversy in the field of mathematics? Did the student use the appropriate source material and site all resources? Did the student demonstrate an understanding of the historical event, discovery or controversy? Was the paper turned in on time and in a neat and orderly fashion?
2. Application/Discovery Problem: Was the problem the student chose an application problem relating to the curriculum of Calculus I? Did the student find a solution to the problem(s)? Was the solution accurate and clearly stated? Did the student present the solution in a clear and concise way that demonstrated understanding to the instructor and other Honors students?
3. Examination of Current Research: Was the student able to find an article they could understand and evaluate? Did the student write a clear and concise synopsis of the article demonstrating their understanding? Did the student seek out additional resources to help them understand and write a synopsis of the research? Did the student present the research in a clear and concise way that demonstrated understanding to the instructor and other Honors students? Was the paper turned in on time and in a neat and orderly fashion?

### **MATH 31**

Three assessment criteria will be used:

1. The formal write-ups of the projects will indeed be at the college level. This includes organization, neatness of written presentation, and grammatical structure. The assessment will be on the basis of acceptable or not acceptable, as opposed to a graduated scale, such as a letter grade of A, B, C, etc.
2. The write-ups will certainly be assessed for the rigor to the mathematical presentation. Again, this will be evaluated on an acceptable or not acceptable basis.
3. The presentations to the Math Club (or class, if there is a time conflict with the latter) will be assessed on the basis of preparedness, correctness, and completeness. Here too, the assessment scale will be acceptable or not acceptable.
4. The faculty member will informally observe the appropriateness of the student's interaction/guidance of his peers in the Math 31 Lab. Constructive feedback will be given to the honors students, but assessment will be based on an acceptable/not acceptable rating by the faculty member based on both the level of expertise of the honors student as well as the appropriateness of the behavior of the student with his peers. Students will demonstrate a higher degree of leadership, class participation, and academic performance through this leadership role with regards to the Math 31 Lab.

### **MATH 31**

The instructor will consider the accuracy, clarity, logic, and completeness of each project or report.

The instructor will be able to answer "yes" to each of the following questions:

- 1a) Did the student write a 1 -2 page college-level historical account of Pierre Bezier and discuss how Bezier curves are used today?
- 1b) Did the student graph Bezier curves given 4 control points, and construct his or her own Bezier curves and combinations of Bezier curves producing loops, some alphabet letters, and other shapes?
- 2a) Did the student write a 1 -2 page historical paper on the discovery of the Binomial Series?
- 2b) Did the student write a report detailing the mathematics behind Newton's derivation? Did it include a mathematical discussion of why Newton's version is equivalent to the Binomial Series in the textbook? Did the student explain, mathematically, how Newton was able to verify his suspicions? Did the student present this report to the class?
- 2c) Did the student find Taylor polynomials and to estimate function values using Taylor polynomials? Was this shown to the instructor? Did the student use L'Hospital's Rules and Taylor Polynomials to create a written analysis Planck's Law for expressing the energy at different wavelengths emitted from blackbody systems? Did the analysis compare Plank's Law to Rayleigh-Jean Law? Did the student graph the relationship between the energy density of blackbody radiation and the temperature of stars using well-known stars? Did the student present the results to the class?

### **MATH 32**

Three assessment criteria will be used:

1. The formal write-ups of the four projects will indeed be at the college level. This includes organization, neatness of written presentation, and grammatical structure. The assessment will be on the basis of acceptable or not acceptable, as opposed to a graduated scale, such as a letter grade of A, B, C, etc.
2. The write-ups will certainly be assessed for the rigor to the mathematical presentation. Again, this will be evaluated on an acceptable or not acceptable basis.
3. The presentations to the Math Club (or class, if there is a time conflict with the latter) will be assessed on the basis of preparedness, correctness, and completeness. Here too, the assessment scale will be acceptable or not acceptable.

### **MATH 33**

- i. A polished, college level write-up will be presented to me for each of these projects.
- ii. These projects will be presented to me prior to the last week of the semester.
- iii. Student will earn a letter grade of no less than 'A' in the regular course.
- iv. The discussions he and I have during our meetings will reveal innovativeness and initiative. These subjective labels will be critiqued by me relative to what should be expected from an advanced differential equations/linear algebra student. If I find that these characteristics are not present I will not allow the honors designation.

### **MUSIC 10**

The assessment criteria are:

1. Was the original work performed on April 27?
2. Did the composition follow the traditional laws of music and did the piece follow A, B, A format?

3. Was the piece at least 32 measures?

### **MUSIC 46**

Student success will be determined by the completion of research assignments. The student will follow standard MLA format for the research paper, include a bibliography, and cover topic in an appropriate length paper. The student will be assessed by how well the student organizes and presents collected historical evidence as the student pursues an overall assessment of the musician's historical importance. The student's evaluation of the collected information on the subject topic, and therefore his conclusion, appraisal, and justification of the student's findings regarding historical significance of the subject, will be assessed.

### **PHILOSOPHY 21**

1. Were reading notes and annotated bibliography submitted and discussed in a timely manner, meeting all of the due dates?
2. Was the paper on a level consistent with the highest standards of a community college analytic/argument paper including, but not be limited to, an introduction, an historical overview of the subject that accounts for the characteristics of modernity, an explanation of the theoretical issues that were at stake, an analysis of how these issues relate to modernity, and a conclusion supported with arguments and evidence concerning whether either Popper or Wittgenstein should be considered "modern philosophers." Also, end notes, references and bibliography should be included.

### **PHILOSOPHY 21**

1. Did student produce detailed notes of Marcel's book?
2. Did student produce a reference list of relevant Sartre references?
3. Did student write a carefully constructed community college level paper which highlights the relevant difference between Christian and Secular Existentialism, with an analysis that draws a specific conclusion regarding the differences?

### **PHILOSOPHY 21**

1. Did the student produce detailed notes of Sandel's book?
2. Did the student produce a paper that includes but is not limited to an introduction, a historical overview, an analysis of the connections, and a conclusion?

### **PHYSICS 4B**

Student will turn in a formal report discussing:

1. the problems
2. the solutions
3. the significance of these calculations in physics

The report must include relevant figures and references. The style and format of the report will have a structure similar to that of a journal article (e.g. Physical Review). The report will have an Introduction section (describing item 1, the problems) a Solutions to Problems section (describing item 2, the solutions), a Discussion section (describing item 3), and a Summary section.

Assignments 1-5 should be completed by November 8. This will give student enough time to look up references that illustrate the applications of the multipole expansion in Physics. This information will be incorporated into his report.

The instructor expects the first draft of the report completed by November 22. The report will be critiqued like a manuscript that is submitted for publication in a refereed journal. The early deadline is needed to give student sufficient time to make corrections. The final “acceptable for publication” version of the report is due December 15.

### **PHYSICS 4B**

Gabriel will build and demonstrate a working model of the Paul trap for the Physics department. He will also turn in a report that:

1. describes the Paul trap and the relevant physics associated with its operation,
2. describes the apparatus he created and demonstrated, and
3. describes the problems he encountered in getting the apparatus to work. Student will also describe any solutions to problems he encountered.

The report must include relevant figures and references. The style and format of the report will have a structure similar to that of a journal article (e.g. Physical Review). The report will have an Introduction section (describing item 1, the Paul trap and its applications); a section describing the relevant physics governing its operation; a section describing the apparatus he created; a Results and Discussion section (describing items such as what happened, what things he did that make it work best, etc.), and a Summary section.

The instructor expects the first draft of the report be completed by November 22. The report will be critiqued like a manuscript that is submitted for publication in a refereed journal. The early deadline is needed to give student sufficient time to make corrections. The final “acceptable for publication” version of the report is due December 15.

### **POLITICAL SCIENCE 1**

The assessment criteria:

1. Was a 9-10 page Analytical Paper provided by the last faculty/student meeting held in the week before finals week?
2. Did the student give a 20-minute PowerPoint Presentation to the professor the week before finals week?
3. Did the analytical paper discuss the conservative and liberal ideologies that have become two dominant ways of thinking in the U.S.?
4. Did the analytical paper meet the high academic standards of Sierra College and include: an introduction; thesis statement; brief background information of the journal; critical analysis of Lakoff’s journal, focusing on the conservative and liberal ideologies and how they apply to our current society, like the 2008 presidential election; a conclusion; a footnotes page; and a Works Cited page (MLA format)?

### **POLITICAL SCIENCE 9**

The student will complete a ten to twelve page research paper. The paper will be judged on quality of research performed, analysis and presentation. A grade on the scale of A-

F will be given. The student will be given written and oral feedback on the essay's strengths and weaknesses.

### **POLITICAL SCIENCE 16**

The assessment criteria:

1. Was a 9-10 page Analytical Paper provided by the last faculty/student meeting held in the week before finals week?
2. Did the student give a 20-minute PowerPoint Presentation to the professor the week before finals week?
3. Did the analytical paper discuss the philosophical ideas of our "Framers of the U.S. Constitution" and provide a critical analysis of the democratic nature of our U.S. Constitution, including our three branches of U.S. government?
4. Did the analytical paper meet the high academic standards of Sierra College and include: an introduction; thesis statement; brief background information of the book; critical analysis of the book, focusing on the philosophical ideas of the "Framers" and a critical analysis of the democratic nature of our U.S. Constitution, including our three branches of U.S. government; a conclusion; a footnotes page; and a Works Cited page (MLA format)?

### **PSYCHOLOGY 3**

The assessment criteria include:

1. The quality of the class presentation including accuracy and completeness of the subject matter, presentation style, and the responsiveness to questions posed by the students and instructor.
2. The evidence (gleaned from an outline, copies of the presentation notes, and the video to be turned into the instructor) of a thorough literature investigation using current material from electronic databases, text and edited books, and any other relevant resources.
3. The synthesis and accuracy of the interpretation of the information she gathered regarding the relationship between values and behavior.
4. The timeliness of the project completion (i.e., the student made the presentation on the scheduled date, and turned in the supporting documents on the last scheduled date of the faculty/student meeting).

### **PSYCHOLOGY 3**

The assessment criteria include:

1. The quality of the class PowerPoint presentation including accuracy and completeness of the subject matter, presentation style, and the responsiveness to questions posed by the students and instructor.
2. The evidence (gleaned from an outline, copies of the presentation notes, and copies of the original research articles to be turned into the instructor) of a thorough literature investigation using current, peer-reviewed empirical and theoretical articles obtained from electronic databases, text and edited books, and any other relevant resources.
3. The synthesis and accuracy of the interpretation of the literature including supportive and non-supportive evidence of the construct of social loafing.

4. The timeliness of the project completion (i.e., the student made the presentation on the scheduled date, and turned in the supporting documents on the last scheduled date of the faculty/student meeting).

### **PSYCHOLOGY 40**

The assessment criteria are:

1. Was a report provided by the last faculty/student meeting held in the week before finals week?
2. Did the report discuss the topic of traumatic brain injuries in war veterans with special emphasis on the Iraq war? Did the report incorporate the current understanding and research findings on the etiology of TBI and recent neuropsychological rehabilitation efforts?
3. Was the report on a level consistent with the highest standards of a community college investigative report including, but not be limited to, an abstract, an introduction, a historical overview of the subject, the main body of the report, a conclusion, and a reference list? Supporting materials in the form of tables, charts, figures, etc., are to be included as appropriate.
4. A brief oral presentation of her report to the biopsychology evening class with visual aids.
5. A brief written summary on the biopsychology related lecture attended at any nearby university.

### **PSYCHOLOGY 42**

Assessment criteria are:

1. Were the discussion topics submitted by the student prior to every scheduled meeting?
2. Was the review provided by the last faculty/student meeting held during the week prior to finals?
3. Did the review discuss the book "Empire of Chance: How Probability Changed Science and Everyday Life" and did the review show a college level understanding of history of probability theory and statistics as they relate to the social sciences?

### **SOCIAL SCIENCE 10**

The student will be assessed on an A, B, C, D, and F scale. The projects for assessment include the following:

1. Higher level of participation in discussion and work groups online. Requires a minimum of three online contacts per week. Instructor will monitor the quality and quantity of the contacts to ensure task proficiency. Designation of Honors will be determined by a rubric to include: thoroughness of responses; application of course concepts and theories; and coherency of responses.
2. Research paper. Five page requirement on an agreed upon topic. The paper will be assessed for currency of information, content organization and presentation, documentation of sources and technical merits.
3. Experiential Activities. Attendance of five cultural events (approved by instructor) with at least one of the events conducted off-campus. A 2-3 page reflection paper is required for each event. Instructor will approve those events that meet the cultural

proficiency requirements of the course. The reflection paper will be assessed on the basis of authenticity, connections between theoretical concepts and one's life, personal development plan to improve oneself with concrete and realistic steps, coherency of content, organization and technical merits.

## **SOCIOLOGY 1**

The assessment criteria are:

1. Was the paper turned in by December 4, 2008?
2. Did the student gather relevant sociological research, properly employ appropriate sociological theories in his analysis of the research, devise a solution to the problem based on the analyses, and suggest ideas for further research?
3. Was the paper on a level consistent with the highest standards of a community college research paper including, but not limited to, an introduction, a review of previous research, an analysis of previous research (including suggestions for further research and possible solutions to the problem), a conclusion, and a reference list? Supporting materials such as tables, charts, figures, etc. are to be included as appropriate.

## **SECTION IV: How Components Differ**

### **AGRICULTURE 200**

Introduction to Animal Science is a course in which students are introduced to the basics of animal science including animal performance. This course can only briefly cover each major area of animal science. This Honor's project delves into equine performance at a much more detailed level than is presented in class. This project goes beyond that by providing hands-on experience in research as well as the additional information utilizing the scientific method.

### **AGRICULTURE 200**

Introduction to Animal Science is a course in which students are introduced to the basics of animal science including introductory animal reproduction. This course can only briefly cover each major area of animal science. This Honor's project delves into animal reproduction at a much more detailed level than is presented in class. For example students in class are only responsible for knowing the function of each of the hormones that control reproduction and thus spermatogenesis. This project goes beyond that by providing hands-un experience in research as well as the additional information utilizing the scientific method.

### **AGRICULTURE 200**

Introduction to Animal Science is a course in which students are introduced to the basics of animal science including introductory animal health and disease. This course can only briefly cover each major area of animal science. This Honor's project delves into animal health and disease at a much more detailed level than is presented in class. This project goes beyond the basics by providing hands-on experience in literature review.

### **AGRICULTURE 200**

Introduction to Animal Science is a course in which students are introduced to the basics of animal science including issues associated with domestic animal production. This course can only briefly cover the technique of genetic testing and its uses. This Honor's project delves into genetic testing and its application to one species and further one breed of animal at a much more detailed level than is presented in class. This project goes beyond that by providing hands-on literature review experience and the presentation of resulting information.

### **AGRICULTURE 200**

Introduction to Animal Science is a course in which students are introduced to the basics of animal science including issues associated [with](#) food animal production. This course can only briefly cover each major issue. This Honor's project delves into land-use issues and their impact to agriculture and, more specifically food animal production at a much more detailed level than is presented in class. This project goes beyond that by providing hands-on experience in research and presentation of resulting information.

### **AGRICULTURE 200**

Introduction to Animal Science is a course in which students are introduced to the basics of animal science including introductory animal health and disease. This course can only briefly cover each major area of animal science. This Honor's project delves into animal health and disease at a much more detailed level than is presented in class. This project goes beyond the basics by providing hands-on experience in observation and data collection as well the additional experience of reviewing literature and interacting with veterinarians and pet owners.

### **AGRICULTURE 203**

AG 203 explores this topic superficially. This honors project exceeds the regular course components by the requirements field research, literature review, as well as data analysis and final presentation.

### **ANTHROPOLOGY 1**

The Anthropology 1 Physical Anthropology course discusses primate behaviours in their own environments for a week during the semester, and provides a very cursory look at behavioral dynamics. This Honors Contract is aimed at allowing the student to explore these same ideas in a more in-depth, hands-on fashion, with the project tailored to the student's interests and abilities.

### **ANTHROPOLOGY 2**

Firstly, there is no research paper required in the regular cultural anthropology course. Secondly, students are not required to delve into such detailed anthropological subjects nor engage them with this level of anthropological analysis.

### **ANTHROPOLOGY 2**

Cultural Anthropology is a course that introduces students to the basic ideas of cultural anthropology, the science of the development of human cultures based on ethnologic,

ethnographic, linguistic, social, and psychological data and methods of analysis. The course can only briefly touch upon these ideas, so the Honors Contract is aimed at allowing the student to explore any one of these ideas in a more in-depth fashion, with the project tailored to the student's interests and abilities. This student will be researching in-depth modern France as it relates to cultural anthropology.

### **ART 10**

The project differs from regular course assignments because it is a specific paper based on the roles and functions of art and its arts inter-relation to public relations. It requires a more comprehensive understanding of art genres, art history, and theory than is required in the regular course format and standards. This paper will be greater in length, more formal in presentation, and more focused in topic than the other class projects.

### **APPLIED ART and DESIGN 90**

The regular course covers basic Flash techniques with general attention to visual and interactivity design. The Honors Contract expands this to include research and analysis of related web sites, greater attention to design, added technical elements, presentation of projects, and class presentations of additional techniques used. The goal is to synthesize research and exploration of additional technical elements into a well-designed and well-constructed professional corporate website containing material appropriate for the target audience.

### **ART 10**

Art 10, Art Appreciation, is a course that introduces students who are generally non-art majors to the vocabulary, concepts, artists, styles, and historical periods of art. While students are required to write a relatively short critical analysis of an artwork, using learned terminology, they are not required to write a research paper suitable for presentation to the class. In addition, they are not required to attend lectures outside of class. The level of research expected by the student is equivalent to the work that a professor must do in order to present a single artist or a major art style to the class.

### **ASTRONOMY 25**

Astronomy 25, "Frontiers in Astronomy," is a course that introduces students to the latest ideas of cosmology, the science of the origin and evolution of the Universe as a whole. Other "frontier" topics are also discussed (e.g., the latest ideas on the formation of planetary systems around stars other than the Sun). The course can only briefly touch upon these ideas, so this Honors Contract is aimed at allowing the student to explore any one of these ideas in a more in-depth fashion, with the project tailored to the student's interests and abilities (in this current case, the student had a desire to explore the concept of time in greater detail).

### **BIOLOGICAL SCIENCES 1**

Bio Science 1 is a rigorous course designed for biological science majors. Although some aspects of behavioral ecology and sociobiology are included in the curriculum, the course is not designed to explore in detail the application of mathematical models in these biological fields. The student's interest in Mathematics and Biology will give him

an opportunity to explore this interesting interface between the two disciplines and gain an appreciation of the importance of application of mathematical models in behavioral and sociobiological studies. This topic goes above and beyond the course content and requires a high level of critical thinking and integration of different ideas. Writing a library research paper in CBE format is required for all the students taking the class. Student will be producing a more extensive paper for Honors designation in addition to the regular term paper required for the class. Additionally, presenting a PowerPoint summary of the paper/project also goes beyond the regular requirements for the course.

### **BIOLOGICAL SCIENCES 2**

The honors experiment differs significantly from course content in that the research explores plant biological information that is beyond the scope of the class. The botany class requires a plant collection or simple short-term experiment for a semester project, whereas this experiment utilizes the same kind of research rigor that one would expect in an upper division course. The student must conduct initial research on the topic, gather data, present data in a logical format and write the results in a paper as according to Council of Biology Editors (CBE) format.

### **BIOLOGICAL SCIENCES 2**

In botany students are required to produce a plant collection as their semester project and it does not include a PowerPoint presentation to the class. Typical botany labs do not require any chemical extractions, crystallizations, fractional distillations, or other upper level experiments. This specifically utilizes cross discipline learning and synthesis of botany and biochemistry concepts. It incorporates aspects of both botany and organic chemistry in the laboratory. The student also must hand in a full lab report including, intro, abstract, theory, method, procedure, data tables, etc. which the botany class does not require. The student is also required to work with many sources outside the botany classroom specifically in biochemistry.

### **BIOLOGICAL SCIENCES 3**

Bio Sci 3, Zoology, is an introduction to the study of animal life. The course material covers the basic functions of the animal, including the excretory system. This course is not able to go into extensive detail of the excretory system due to time constraints. This honors project will allow the student to explore the excretory system in depth. Not only will it help the student in the future as a veterinarian, but it also is a subject in which the student is very interested.

### **BIOLOGICAL SCIENCES 10**

Biology 10 is a non-majors introductory course that involves a basic survey of biological concepts. The majority of the information supplied in class is at an introductory level and does not involve an in-depth look at many topics. We will spend time in class discussing ecological processes, the human impact on the environment and different aspects of biodiversity. This project will offer an extension of the aforementioned topics by requiring the student to look at these topics in a "real world" setting. It is easy in a classroom to say that people should take better care of the environment but it is a very different thing in practice, it will require the student to view ecological issues from a

stakeholder's standpoint and the student will learn that the protection of the environment is a complicated process. Since the biology 10 class does not require a paper, the writing of this paper will be beyond the basic requirement of the class and the level of writing expected will teach the student how to better communicate through writing.

### **BIOLOGICAL SCIENCES 10**

Biology 10 is a non-majors introductory course that involves a basic survey of biological concepts. The majority of the information supplied in class is at an introductory level and does not involve an, in-depth look at many topics. We will spend time in class discussing ecological processes, the human impact on the environment and different aspects of biodiversity. This project will offer an extension of the aforementioned topics by requiring the student to look at these topics in a "real world" setting. It is easy in a classroom to say that people should take better care of the environment but it is a very different thing in practice. It will require the student to view ecological issues globally and the student will learn that the protection of the environment is a complicated process. Since the biology 10 class does not require a paper, the writing of this paper will be beyond the basic requirement of the class and the level of writing expected will teach the student how to better communicate through writing.

### **BUSINESS 49**

The Honors Contract will be taking the student into a deeper depth of the class. The student will take one subject that is broadly covered in class and rigorously research it. The student will be required to submerge himself in the subject completely in order to make informed decisions as to the specifications of the constitution and laws of the U.S. At the end of the semester the student will be required to compose a 28-page research project as well as a presentation, which is not required of other students in the class.

### **BUSINESS 49**

Business 49, "Law and Society," is a course that introduces students to U.S. laws which have an impact on our lives as individuals, as consumers and as members of a democratic society. The course provides students with a fundamental understanding of constitutional law, criminal law, torts and consumer law, and family law. This course can only briefly touch upon these ideas, so the Honors Contract is aimed at allowing the student to explore the legal and environmental impact of the Court's decision in a more in-depth fashion.

### **BUSINESS 49**

Business 49, "Law and Society," is a course that introduces students to U.S. laws which have an impact on our lives as individuals, as consumers and as members of a democratic society. The course provides students with a fundamental understanding of constitutional law, criminal law, torts and consumer law, and family law. This course can only briefly touch upon these ideas, so the Honors Contract is aimed at allowing the student to explore the ethical basis for the law in a more in-depth fashion.

## **BUSINESS 49**

Business 49, "Law and Society," is a course that introduces students to U.S. laws which have an impact on our lives as individuals, as consumers and as members of a democratic society. The course provides students with a fundamental understanding of constitutional law, criminal law, torts and consumer law, and family law. This course can only briefly touch upon these ideas, so the Honors Contract is aimed at allowing the student to explore human rights in the context of diamond and coal mining in a more in-depth fashion.

## **BUSINESS 49**

As a part of the course requirements, students will complete a research project and present it to the class, comparing the legal system of another country with that of the United States. The goal of the research project is to provide students an overview of legal systems and critically compare and contrast the two systems. The report is not to exceed five pages.

In contrast to the research project in class, the Honors Contract requires the student to demonstrate a higher understanding of the complexity of a particular act and how it works on a national level, including how our government uses specific processes in order to benefit and contribute to society. Moreover, the project is more specific and in-depth as demonstrated by the scope of primary resources that she will review and analyze, and the greater length of the final report.

## **CHEMISTRY 2A**

This Honors Contract will use course concepts to address and explain a problem (greenhouse gases and global warming) and remedy (photovoltaics and solar energy) within the overall topic of sustainability. The parent course, Chemistry 2A, "Introduction to Chemistry", is a survey course highlighting key components in the field of chemistry with a conceptual approach to chemical principles. Due to the volume of course material and time constraints, current applications of chemistry are mentioned but never explored in detail. For example, the review of greenhouse gases and global warming will focus on the key component of the carbon cycle, carbon dioxide (CO<sub>2</sub>). The student will explore the effects of CO<sub>2</sub> on global climate including the molecular nature of CO<sub>2</sub> and the physical nature of this molecule to absorb radiation emitted from the earth. The student will also address the three major natural CO<sub>2</sub> reservoirs (atmosphere, land biosphere, oceans) and the chemical processes that lead to CO<sub>2</sub> cycling among these reservoirs, such as the oxidation of terrestrial organic carbon, the chemical nature of seawater to absorb CO<sub>2</sub>, the effects of ocean temperature on gaseous CO<sub>2</sub>: absorption, and establishing equilibrium conditions between air and seawater. With this background information, the student will explore the impact of climatological changes. Such changes might include thermal expansion of ocean water, solubility changes of CO<sub>2</sub> in oceans with increased atmospheric CO<sub>2</sub> partial pressure, pH changes of seawater, or the impact of changes in aragonite (CaCO<sub>3</sub>) supersaturation points on reef forming corals. Thus an honors student will greatly benefit from a detailed exploration of topics with relevance to our current community at large.

### **CHEMISTRY 5**

Chemistry 5, "Quantitative Analysis", is a course required for chemistry and chemical engineering majors. It is also required by most state and federal crime labs for individuals wishing to work in the field of forensic science. The course covers a broad range of analytical chemistry techniques, including gravimetric, volumetric, and spectroscopic analysis. In addition to these analytical techniques the statistical analysis of data is reviewed and applied to all experiments performed in the lab. The course however only introduces these techniques and includes staged/prepped experiments to demonstrate and allow the student to practice the principles learned. This Honors Contract is aimed at allowing the student to apply any of the above techniques in greater depth to studying a real world analytical chemical analysis of the student's interest.

### **CHEMISTRY 12A**

The extra Characterization will include techniques that the non-honors students will not do. These will involve a greater understand of how the instruments work and how to use them to obtain the required data. These techniques are generally only used by advanced graduate students, post doctoral and professional scientist. The reports will be separate from the normal course work and will be formatted as articles in the Journal of Organic Chemistry.

### **CHEMISTRY 12B**

The students will need to prepare oral presentations, formal reports, and take quizzes. The material covered will be beyond the scope of the normal course, and include topics that are traditionally taught in upper division undergraduate and graduate level courses.

### **COMMUNICATION STUDIES 2**

Several speeches are assigned to the students during the semester. However the honors student will be asked to give a five-minute long speech using PowerPoint presentation and it will be videotaped so she can evaluate her own performance (the videotape presentation is not part of the regular coursework). In addition, she will have to write a detailed critique on an outside performer (not part of our normal curriculum). Attending Toastmasters meetings will give the student an opportunity to work with and observe professionals. Toastmasters is a club for professional public speakers. The only way to gain knowledge through an oral communication class is to practice by giving additional presentations or observing professionals. The student will be giving a least twice as many speeches as the rest of the class.

### **COMMUNICATION STUDIES 8**

Communication Studies 8, Interpersonal Communication, is a sophomore level course that introduces students to the foundational theories and principles of dyadic communication. The course covers many areas including self-concept, perception, listening, emotions, verbal and nonverbal communication, relational dynamics, and conflict management. The course provides some depth of knowledge in a number of areas, however the honors contract will allow the student to engage in a deeper and

richer understanding of theory and praxis in a specific content area in line with her interests.

### **COMPUTER INFORMATION SYSTEMS 80**

The standard CIS 80 focuses specifically on the technical use of Excel to complete specific project guidelines. However, only a brief data analysis of the workbook results is required. This Honors Contract focuses on solving complex managerial problems using applications software as a tool. It also requires both a written and oral communications component not present in the standard CIS 90 course objectives.

### **ENGLISH 1A**

Students in the regular course are required to complete only one research paper. This student will be completing an additional research paper on the subject of how specific societal issues accelerate and decelerate the economy and the effects on an individual's life choices. The analysis will be on material that is significantly longer and more complex than what the other students will be doing.

Also, where other students are required to analyze each other's work, this student will be doing three times as many reviews, giving her much more experience in critical analysis.

### **ENGLISH 1A**

English 1A is a course that introduces students to college-level composition, with an emphasis on critical reading and writing. Students read outside essays to fully engage in analyzing and constructing the structure of a well-planned, college-level composition. The course can only briefly touch upon outside works, so the Honors contract is aimed at allowing students to further enhance critical reading, writing, and synthesizing skills by reading a literary classic, a modern author's use of the classics, and a scholarly article which then helps the student fully synthesize that information through the critical review report.

### **ENGLISH 1A**

English 1A: Introduction to Composition is a course about the study of essays, with concurrent development of rhetorical skills necessary to critical reading and writing. During the semester there are four required essays and one timed essay on a novel read outside of class. Since this is an introductory course the class can only briefly reflect on the analysis of literature, so the Honors Contract is aimed at allowing the student to explore literature by in depth analysis with an essay tailored to focus on historical and cultural perspectives of the period.

### **ENGLISH 30A**

English 30A covers American literature from the time of Columbus through the Civil War. Thus, we are able to spend only about four weeks of the semester discussing the Revolutionary War period and only one class period discussing Thomas Paine. The added reading, research, and writing that the student will complete will allow him to go far further into the Revolutionary era thought and writings than the nature of the American literature survey course permits.

### **ENGLISH 30A**

English 30A covers American literature from the time of Columbus through the Civil War. Thus, we are able to spend only about two weeks of the semester discussing Puritan history, religion, culture and literary production. The added reading, research, and writing that the student will complete will allow him to go far further into the Puritan era than the nature of the American literature survey course permits.

### **HISTORY 17B**

The student will examine this specific historical topic in more detail than regular course assignments provide the opportunity to do. The project will require the student to examine and evaluate the strength of historical interpretations and develop his own, based upon his examination of pertinent secondary and primary source materials.

### **HISTORY 17B**

The Honors project goes beyond the scope of the standard American History survey course into a study focused on a specific episode in history. The analytical study allows for the exploration of the processes of historical research and reconstruction.

### **MATH 10**

Students in Math 10 are not required to create problems of this level and are also not required to present, or explain, student created problems. The creation of well written problems, employing a variety of strategies, with the right amount of given information, that are interesting and challenging to solve is way beyond the scope of a regular student.

### **MATH 13**

The problems in the Math 13 textbook help students learn the concepts of statistics. The honors contract allows the student to pursue a real-life application of statistical techniques. This project examines an application which occurs in real life – choosing a given name which reflects the parents' views and influences the child's future.

### **MATH 13**

Math 13, Elementary Statistics, does not provide any examples of currency exchange rates in which statistical methods are used in the analyses and conclusions. Since these rates are of extreme importance to the US economy, the study could have long-range benefits in both predictions and in methods of approaching the problem.

### **MATH 30**

In deriving the relationships between circular and hyperbolic functions, and in deriving the maximum deflection angle for an ellipse, student's experience will differ greatly from the experience of the other students. Strong skills on recently learned material are needed in accomplishing those goals. In addition, these relationships are not covered, nor are mentioned, in the standard course. Furthermore, the application of Taylor Polynomials is beyond the scope of a traditional first semester calculus course.

### **MATH 30**

The student will solve more challenging problems than those assigned to the class as a whole. The student will work independently with little or no assistance from tutors or the instructor. The written report, project write-ups and oral presentation are not normal aspects of the regular course.

### **MATH 30**

The students in the regular Math 30, Calculus I class will not be completing application problems on the level or complexity of the application discovery problems of the Honors students. The Honors student will also get to explore a historical component of mathematics as well as look at some current research. In doing so, the Honors students will be reading articles and papers relating to math and applying the skills learned in class to understand the research.

### **MATH 31**

Both the leadership in the lab component of this contract and the presentation of the theory concerning the relationships between circular and hyperbolic functions differ from the experience of the other students. In addition, the application based development of the techniques of solving differential equations extends well beyond the expectations of the peers of this student in Math 31.

### **MATH 31**

Student will be exploring two main components of the topics of the class beyond what non-honors students will learn. The first are the physical applications. These applications highlight the interdisciplinary nature of the mathematics involved, and will result in a level of rigor noticeably greater than the regular course components. Secondly, the logic and math combinations involved in the proofs and derivations found in Calculus II always require a level of rigor noticeably greater than the regular course components.

### **MATH 32**

Clearly the components of this contract employ the mathematical concepts studied by this student's peers in the appropriate applications. Mathematics is a discipline with an inherent beauty of its very own. Regardless, with each notion of study in this course, the applications abound. These projects allow the student, unlike her peers, to connect the mathematical study to specific applications.

### **MATH 33**

Math 33 neither covers the applications mentioned with the conic section or the rotating shaft projects nor the extension of Linear Algebra projects mentioned above (the uniqueness of a zero element of a vector space and the intersection of the specialized subspaces). In fact, with regards to the project involving the conic section, one does not expect the student in this lower-division course to have the capstone ability to synthesize both the physical concept involved and the mathematical techniques learned. In addition, the rigorous pursuit of the uniqueness of the zero element of a

vector space that I intend to have student investigate go well beyond what I would expect of the brightest Math 33 student.

### **MUSIC 10**

Music 10 covers learning about the traditional rules of music but does not require any student to write music or to play an instrument. By completing this project, the student will be going above and beyond what the rest of the class participates in.

### **MUSIC 46**

In regular Jazz Ensemble, there is no research of any kind required, especially pertaining to that of a high quality paper that the student will be composing on that of the selected jazz musician. The student is not presented any jazz history in regular jazz ensemble and this contract enables the student to explore the multitude of influences Jazz music has had throughout its history. Also, while the students are required to perform in their own concerts, they are not required to attend a live professional orchestra. The honors contract enables the student that opportunity to do so in order to achieve a greater appreciation of the field that would not be attained in this course without such honors contract.

### **PHILOSOPHY 21**

This project differs in that it requires reading and analyzing philosophical developments that are beyond the scope of the class yet were influenced by the issues we will be discussing all semester.

### **PHILOSOPHY 21**

Philosophy 21 is the History of Modern Philosophy, wherein the metaphysical and epistemological underpinnings of modernity. Existentialism is a particular challenge to these suppositions which we do not cover in class. Therefore a careful analysis of Existentialism goes well beyond the scope of what we are able to address in class.

### **PHILOSOPHY 21**

This is a class in the History of Modern Philosophy which primarily deals with the metaphysical and epistemological underpinnings of modernity. This project will examine how those underpinnings extend to the realm of politics and law, which is well beyond the scope of anything we are able to cover in class.

### **PHYSICS 4A**

The assignments involve physical systems more complex than those seen in Physics 4A. In fact these systems are usually seen in an honors level physics course or in an advanced undergraduate course.

### **PHYSICS 4B**

The assignments involve calculations that are more complex than those seen in Physics 4B. In fact these problems are generally covered in junior and senior level physics courses.

### **PHYSICS 4B**

The assignment involves a physical system that is more complex than those seen in Physics 4B. It will also involve experimental techniques that are beyond the scope of the course.

### **PHYSICS 4B**

In Physics 4B, the calculation of the electrical potential due to a thin, uniformly, charged, conduction ring involves an integral that can only be evaluated analytically if the potential is determined on the axis of the ring or in the plane of the ring for points inside it. The stated problem must be carried out with approximation methods. The application of numerical methods to physical systems is not taught in Physics 4B.

### **POLITICAL SCIENCE 1**

Political Science 1 (Introduction to American Government) introduces students to the basic structure and ideologies (liberal and conservative) of politics and government in the U.S. This honors project will provide the student with an opportunity to critically examine the conservative and liberal ideologies, which is only briefly discussed in the Political Science 1 course, in an effort to produce a greater understanding and heightened appreciation for the kind of democratic society we live in.

### **POLITICAL SCIENCE 9**

The additional research and essay written shall differ from the regular course work in that it will address the cartel behavior of oil producers in the Middle East, and the economic and political ramifications of this on the region. This topic is only touched on lightly in the course. This research will provide a deeper understanding of the current American issue of high oil prices and the Middle Eastern role in their fluctuation. The project exceeds the regular requirements of the class in the completion of a research paper, which is otherwise not required.

### **POLITICAL SCIENCE 16**

Political Science 16 (Introduction to Political Theory, or Political Philosophy) introduces students to the basic political theories concerning the structure and principles of U.S. Constitution. This honors project will provide the student with an opportunity to critically examine the democratic nature of the U.S. Constitution, which is only briefly discussed in the Pol. Sci. 16 course, in an effort to produce a greater understanding and heightened appreciation for the kind of democratic society we live in.

### **PSYCHOLOGY 3**

Psych 03, "Social Psychology", is a course that introduces students to the study of human behavior in social interactions. The course covers an assortment of topics including the development of the self, values and behavior, interpersonal attraction, prejudice, altruism, and many more. Since the course covers a broad introduction to many issues in social psychology, very few of them are discussed in depth. Therefore, the Honors Contract allows the student to elaborate on her understanding of the relationship of values and behavior at a depth not afforded in the regular classroom setting and in a manner that is tailored to her interests and abilities.

### **PSYCHOLOGY 40**

The Psychology 40 – Introduction to Biopsychology course introduces students to the fundamentals of brain and behavior. The course focuses on biological basis of behavior. Since this is a survey course it can only give students a tantalizing glimpse of the applications of biological psychology in our everyday lives. So this Honors Contract is aimed at allowing the student to explore one of these topics in a more in-depth fashion. The project is designed to emphasize the student's interests and abilities. The Honors rigor differs from regular course components in that it requires an in-depth study of the topic. Student has to turn in a high quality written report. The student will be using outside resources including journal articles and primary source books. This is usually not a requirement in the regular course components. She will also get a chance to attend a lecture/seminar by an established biopsychology researcher. This will further enhance her knowledge and understanding of the field as she is exploring the possibility of majoring in biopsychology.

### **PSYCHOLOGY 42**

Psychology 42, Introduction to Psychological Statistics, introduces the fundamental elements of descriptive and inferential statistics that are in common use within the field of Psychology. The origins of probability theory, statistics, and the controversies surrounding their use in the social sciences are topics that cannot be discussed in great detail. The Honors Contract can serve as a means for a motivated student to attain much greater depth of knowledge and an appreciation for the place of probability theory and statistics within the social sciences and other disciplines.

### **SOCIAL SCIENCES 10**

Regular course components include two cultural events. In addition to these two, the student will do five more for honors credit. The research paper the student will be doing is extra work and is not included in the regular course requirements. Also, the student will be expected to participate in discussions more than the regular students.

### **SOCIOLOGY 1**

Sociology 1, Introduction to Sociology, is an introductory level class that briefly covers all of the major topics of sociology in one semester. As a result, no topic is discussed at length. Therefore students only get a small taste of the various aspects of sociology. This Honors Contract is designed to allow the student to explore a specific topic much further. This topic was chosen because the student expressed concern about it and a desire to gain greater understanding about it. The project will require significant time and energy be spent researching the topic and writing a paper in addition to the regular coursework required of all other students.