

2010-2011 Tandem Friends Course Selection Form (Grades 10 – 12)

Directions:

- 1) All students entering grades 10 - 12 must complete this form. Current students should have it signed by a parent and returned to your advisor on **Monday, March 15th during Advisory (OR to Nura prior to Monday.)**
- 2) Please consult Tandem Friends Upper School Offerings 2010-2011 and Selected Course Descriptions (both included in this packet) to determine which academic classes you should sign up for; please note that **some enrollments are based on faculty recommendations. If you are still unsure of your placement, talk to your current teacher. If, after talking with your teacher, you still want to take a class for which you aren't recommended, write in your request and we'll talk further.**
- 3) All students must take at least six classes, five of which should be in the academic disciplines (English, history, science, mathematics, and foreign languages). **Students in grade 10** take the required course in Health during either the Fall or Spring semester; 10th graders will be placed **in the semester that best fits into their academic schedules. Thus, all 10th graders should list their elective choices in case they are assigned to Health in Spring 2011.** After listing required or requested academic classes, please list your elective preferences. Elective choices are listed on the bottom of this form. If you wish to take more than six classes, please indicate.

Student's Name: _____ Grade Next Year _____

Parent's Signature: _____

Please fill in required, recommended and requested academic courses. Enrollment in Advanced Placement AND other classes (see * below and on back of this page) requires prior approval by the current teacher in that discipline, as you know. Your advisor and Nura know your placement recommendations if you are still unsure.

English: _____

History: _____

Math: _____

Science: (11th and 12th graders) - please note 1st _____

and 2nd _____

and 3rd _____ science choices

Foreign Language: _____

Please list elective course preferences in order of preference. List FOUR since there is no guarantee that you will be given your first or second choice.

1) _____

2) _____

3) _____

4) _____ (Some elective courses will be offered only if there is sufficient enrollment).

Tandem Friends School Upper School Course Offerings 2010-2011

English

- 9th: English 9
- 10th: English 10
- 11th: American Literature
- *12th: Senior Composition or Advanced Placement English Lit
(based on English department recommendations)

Math (the math department will determine placement)

- Algebra I, part 2
- Algebra I
- Geometry
- *Advanced Geometry
- Algebra II
- *Algebra II with trigonometry (prerequisite for Precalculus and AP Calculus)
- *Precalculus
- *Advanced Placement Calculus (AB)
- *Advanced Placement Statistics
- Statistics

Foreign Language

- | | |
|---------------------------|----------------------------|
| Latin I | French I |
| Latin IIB | French II |
| Latin III | French III |
| *Advanced Placement Latin | French IV |
| | *Advanced Placement French |

History

- 9th: World History
- 10th: World Geography
- 11th: U.S. History or
*Advanced Placement U.S. History
- 12th: Govt. (required)- a one semester course that will be offered either Spring or Fall semesters
*AP Govt.

Science

- 9th: Biology
- 10th: General Chemistry or
*Analytical Chemistry
- 11th/12th: *Advanced Placement Chemistry
*Advanced Placement Biology
* Physics
* AP Environmental Science
Bioethics/Forensics
- Other:
 - Psychology
 - Computer Applications

- Spanish I
- Spanish II
- Spanish III
- Spanish IV
- *Advanced Placement Spanish

* denotes teacher recommendation requirement

Arts

Ceramics
*AP Studio Art
Photography
Digital Film
Publications
Drawing
Mixed Media
Guitar
Jazz Ensemble
Rock and Roll
Acting Shakespeare

Graduation Requirements

Twenty-two credits are required for graduation. Academic credit is not given for courses taken prior to 9th grade, although these courses may help meet a student's distribution requirements if they are considered to be high-school level classes. The distribution requirements are as follows:

- 4 years of high school English;
- 3 years of high school math taken during the high school years; must include at least Algebra I, Geometry, and Algebra II;
- 3.5 years of high school history, including U.S. History and U.S. Government;
- 3 years of high school science: must include Biology and Chemistry;
- 3 years of a foreign language taken during the high school years (Latin IV taken in 10th grade also fulfills the requirement);
- 1 year of study in the arts (art, music, drama);
- competency in word-processing and other computer skills must be demonstrated;
- approved and completed Senior Project is required senior year.

* denotes teacher recommendation requirement

Fall 2010 Selected Course Descriptions

Full Year Courses: (Course descriptions of required classes are not listed below: see Upper School Curriculum Guide on the Tandem webpage for required course descriptions).

HISTORY:

AP Government (seniors- determined by current US History teachers' recommendations, based on published AP guidelines).

In Advanced Placement United States Government & Politics, students explore the federal system of government in the United States—its constitutional framework, its various incarnations, and its result as we see today.

- Students learn about the political philosophies undergirding our system of government in the United States.
- They study the vast constituencies of our system of government.
- Finally, students learn about the mechanisms of policy-making and evaluate the strengths and weaknesses they present, including the often tendentious exchange between the three branches of government.

United States Government & Politics at the AP level provides students with a richer theoretical basis in understanding our system of government. Additionally, the course challenges students with interpretive assignments critiquing both the mechanisms of our federal system and various scholarly analyses. (Note: Seniors NOT taking AP U.S. Government & Politics are required to take the semester-long U.S. Government class--offered either in Fall 2010 or Spring 2011--to be determined during scheduling this summer).

ENGLISH:

Senior Composition: Senior Comp is the English course required for all seniors who are not taking AP English 12. Designed primarily to insure that each Tandem Friends graduate has the reading and writing skills necessary to succeed in college and other post-high school learning, Senior Comp is grounded in a systematic and individualized approach to both reading and writing. Students read a wide variety of texts; explore content and style through discussion, study questions, and reading journals; and finally, craft written responses of their own to both the texts themselves and teacher-designed assignments.

AP English 12: In this full-year course, senior students read literature in a variety of different styles and genres, from Shakespeare to Toni Morrison, while gaining, through study of literary terms, techniques and analytical methods, a thorough understanding of the writer's craft. Both daily and long-term formal writing assignments focus on a text's themes, tone, structure, and other craft issues.

Work in a monthly poetry journal gives students extensive practice in analyzing aspects of a poem such as imagery and form. Class discussion, group work and the preparation of several formal presentations provides students with numerous opportunities to think and speak about the literature, as well. In addition to these activities, students write, share, and often score a total of eight in-class essays from previous AP exams. Time is regularly set aside for practice multiple-choice questions. One important goal of this course is to fully prepare students for the AP English Literature Exam.

SCIENCE:

Advanced Placement Biology

This course is designed to be the equivalent of a college introductory biology course. Topics include three major areas of study: molecules and cells, heredity and evolution, and organisms and populations. There are 12 required labs. Students are expected to do a significant amount of outside reading and make a commitment to their laboratory work. Double periods will be scheduled twice each week, most likely before regular school hours.

General Chemistry

This class provides an introduction to some of the important concepts of the science of chemistry. Topics covered include matter and energy, atomic structure, the periodic table, stoichiometry, states of matter, solutions and acid/base chemistry, and a study of the chemistry of natural waters. The course emphasizes quantitative calculations and requires algebraic math skills.

Analytical Chemistry

This class consists of a thorough survey of the fundamental concepts of chemistry. Topics covered include matter and energy, electron configuration, the periodic table, common types of chemical reactions, stoichiometry, states of matter and its properties, solutions, acid/base chemistry, and chemical equilibrium. This course will cover material faster and with a more rigorous mathematical approach than General Chemistry and is designed to serve as preparation for AP Chemistry. Permission of the department is required.

Physics (11th and 12th grade)

This class will consist of an introduction to many of the important concepts of the science of physics, including mechanics, electricity and magnetism, and optics. Specific topics of mechanics include kinematics, force and motion, gravitation, work and energy, and momentum. The study of electricity and magnetism will include charge and electric field, electric potential, capacitance, and an introduction to circuits. Optics topics include an introduction to waves and mirrors, lenses, and diffraction. If time allows, quantum theory and modern physics will also be introduced. This course will entail a rigorous mathematical approach to the study of physics and requires strong algebra skills and familiarity with trigonometry. Students completing this course will be well prepared for a college level physics course.

Advanced Placement Chemistry

This course covers topics typically found in a first year college chemistry course, with an emphasis on preparation for the Advanced Placement Exam. Topics include: atomic theory and atomic structure, chemical bonding, nuclear chemistry, nuclear equations, half-lives, and radioactivity; chemical applications, Laws of ideal gases, kinetic-molecular theory, liquids, solids and solutions, reactions, stoichiometry, equilibrium, kinetics, thermodynamics and descriptive chemistry. Prerequisite: Successful completion of Chemistry and teacher recommendation.

AP Environmental Science (11th and 12th grade)

The goal of the AP Environmental Science course is to provide students with the scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world, to identify and analyze environmental problems both natural and human-made, to evaluate the relative risks associated with these problems, and to examine alternative solutions for resolving and/or preventing them. Environmental science is interdisciplinary; it embraces a wide variety of topics from different areas of study.

Bioethics/ Forensics (11th and 12th grade)

The Fall semester Bioethics elective will be an exploration of how the intersection between morals and science causes deep ethical conflicts in society. On the one hand, as humans continue to refine their technological capacity to modify nature – from the level of an individual organism’s genetic code to the global climate feedback systems of the earth – these technologies will have positive or negative impacts on the nature of our bodies and ecosystems. On the other hand, as larger sections of the world’s societies become more inclusive and diverse in their social composition and organization, disagreement over the ethical implications of these technologies will also increase. Therefore, it is a matter of survival for human societies to improve their moral/ethical skills in scientific reasoning. This course in Bioethics seeks to train students to address these ethical problems responsibly as present and future consumers, voters, and policy-makers, as well as potential scientists, health practitioners, and other professionals.

The spring semester Forensic Science elective, or Criminalistics, the study of science in law, is an ideal extension of integrated science, biology, geology, physics, and chemistry. This class is designed to challenge students with topics such as fingerprinting, DNA analysis, blood typing and spattering, trajectories (for ballistics as well as blood spattering), comparative anatomy, and chemical analysis of drugs, poisons, and trace evidence, and the dynamics of Physics. The teaching goals of class include the following: exposing students to sophisticated laboratory equipment, exposing students to the significance of physical evidence, educating students to the admissibility of evidence into a court of law, encouraging electronic searching methods, developing writing and speaking skills, encouraging inquiry, cooperation and authentic assessment, demonstrating the experimental limitations on accuracy and observation.

MATH:

Geometry

This course is a basic study of geometric principles and logical reasoning. It is designed to help students master practical skills and understand ideas that will be useful both in future math careers and in life. In addition to the textbook, students will use traditional geometric tools and computer programs to enhance learning. Organization will be an important aspect of the course, as will an attitude of seriousness and commitment to learning. Finally, during this course, students will prepare for the PSAT and the SAT exams within the scope of the regular curriculum.

Advanced Geometry

This course is designed for students who have completed Algebra I, have demonstrated strong academic skills, and enjoy challenging mathematics. It includes a study of parallel lines, triangles and polygons, congruence, similarity, geometry of circles, area, volume, Pythagorean theorem, and right triangle trigonometry. Students will be exposed to both investigation (induction) and proof (deduction) as the primary means of building a ‘system’. Students will gain an appreciation for attacking mathematics using many strategies: analytically, numerically, graphically, and visually. As well, the course will delve into other types of geometry (perspective geometry), connections between geometry and algebra (the 17 Wallpaper Groups), and applications of geometry to the real world (architectural design).

Algebra II

This is a comprehensive, one-year Algebra II course designed for students who do not intend to take Pre-Calculus in the Upper School. Topics include: review of linear and polynomial functions through data analysis, solving systems of equations and linear programming problems, factoring, operations with rational expressions, operations with polynomials, simplifying radicals and solving radical equations, exponential and logarithmic functions, and identifying and graphing conic sections. Problems are solved and understood manually, by considering graphs and tables, and by checking feasibility of solutions. Students use the TI83+ graphing calculator when appropriate.

Algebra II with Trigonometry

This is a comprehensive, one-year Algebra II course designed for students who intend to take Pre-Calculus in Upper School. Topics include all of the Algebra II topics as well as a unit on the unit circle and circular (trigonometric) functions. Parametric functions and recursively-defined functions are also introduced. Problems are solved and understood manually, by considering graphs and tables, and by checking feasibility of solutions. Students use the TI83+ graphing calculator when appropriate.

Pre-Calculus

This course is an elective, fourth year mathematics course, intended for the student who has finished mathematics distribution requirements and seeks more enrichment in the typical analysis sequence. It differs from other fourth year electives in that it is functionally and algebraically more rigorous, and topically more preparatory for the Calculus intending student. For example, the course will thoroughly treat circular, polynomial, and rational functions not investigated previously, as well as giving a thorough, rigorous review of topics from previous courses in the sequence. If the student has completed his/her distribution requirements prior to 11th grade, this or another fourth year elective is required for graduation.

Statistics

Statistics is an elective fourth or fifth year Upper School mathematics course. The course may be taken at any time that the student has completed, or is currently taking, Algebra II. It is essential to be a literate consumer of data supported by statistics in today's world where we are inundated with data and information that asks us to compare competing products, ideas, attitudes, and beliefs. Statistics is also the most common math requirement in a 4-year college degree, with applications in such diverse fields as Psychology, Political Science, Medicine and Finance. In this class we will work toward literacy and set the stage for success in future consumption of Statistics, whether that be in AP Statistics classes, college statistics courses, or careful reading of newspapers and television-watching. We will gather the tools to enable us to make and defend an argument and to evaluate the positions of other players in our debates.

Advanced Placement Statistics

AP Statistics is an elective, fourth or fifth year mathematics course, intended for the student who has finished through at least Algebra II and who seeks a fast-paced, rigorous course. Content and pedagogy is typical of what a student might expect in a one semester, competitive, collegiate Statistics offering. The content is dictated by the content of the AP exam in Statistics - students taking the course are required to take this exam in May 2006. Permission of the instructor and the student's previous instructor is required in order to join this class. The content of the course falls broadly, and reasonably equally, into four major categories: univariate and bivariate data analysis, experimental design, probability, and inferential statistics.

Advanced Placement Calculus

Calculus is an elective, fifth year mathematics course, intended for the student who has finished the required prerequisites and seeks a demanding, fast-paced analytical extension of what they have learned. The content and pacing is typical of what a student might expect in the first year (1 to 2 semesters) of a collegiate setting. The course content is somewhat dictated by the required topics for the 2001 AB AP Calculus exam. Material covered, and pace of presentation will be geared so that students will be adequately prepared to take the AP exam by early May. After the exam, students will engage in a variety of independent projects.

ARTS:

Studio Art AP

This is a year-long (often two-year) course run under the auspices of The College Board. The class is designed for students who are seriously interested in the practical experience of art. In lieu of a written exam, students submit portfolios for evaluation at the end of the school year. Early in the course students select their area of study from three portfolio choices; drawing, 2-D design, or 3-D design. Each portfolio's three sections: quality, breadth, and concentration, address three major concerns that are constants in the teaching of art: 1) a sense of quality in a student's work; 2) the student's concentration on a particular visual interest or problem; and 3) the student's need for breadth in the formal, technical, and expressive means of the artist.

Jazz Ensemble

This is a full year, performance-based course. Students should be competent in sight-reading on their instruments. The class will learn music ranging from classical to jazz.

OTHER:

Fall Semester Courses

MUSIC ELECTIVES

The Guitar: all styles (Fall semester)

The guitar is a great instrument to start the study of music. Like the piano, it is a harmonic instrument--one person can be a full orchestra or band. This course can work for a broad range of knowledge, for everyone will be going at his/her own pace. Through studying the basic musical language and chords you will be able to accompany yourself on songs and be able to read and play a musical score. The class is designed to work with individual interests.

Rock and Roll (Fall semester)

Explore the incomparable genre of R&R from the 1950's to now. The class will include history, theory and performance and is open to all levels of musicianship including beginners. Drummers, bass, guitar and keyboard players are especially welcome.

VISUAL ARTS:

Ceramics

This is a semester long studio class designed to expose students to the various methods of pottery construction. Students learn hand-building as well as wheel work. In this context, they are challenged by three-dimensional composition and the differing clay properties. Once students have mastered the construction techniques, they are required to create a number of forms, selecting that technique best suited to their design. They are expected to experiment with texture, shape, and color in the final execution of their form.

Photography

This is a semester long studio-field class in which students learn basic photography skills, the use of a 35mm camera, and developing black-and-white negatives. Functional darkroom manipulation, such as dodging and burning in, and the use of filters, will be explored. Emphasis is on technical skills, such as clarity and contrast of prints, as well as an introduction to composition.

Drawing

This is a semester long studio class in which students are introduced to a variety of media and drawing techniques. Various exercises are used to develop eye-hand coordination as well as observational skills. Students learn how form reflects light, and how the depiction of light and shadow can delineate form. They will work on different surfaces and learn how to best convey their ideas through selection of style, media, and ground.

Mixed Media

This is a semester long class in which students survey numerous media. Projects are quite varied and often determined by the students at the beginning of the course. Examples of media and techniques covered include stained glass, batik, sculpture, printmaking, bookbinding, etc. Emphasis is on technique and developing an awareness and appreciation of art surrounding us. Students will gain proficiency in a variety of media and learn to utilize and maintain various tools and equipment in a studio environment.

Publications

Publications will be a one-semester course offered during the spring and fall semesters. The focus will be on yearbook and graphics publications for the school. Students will create all posters, t-shirts, brochures, etc. for theater, film, and athletic events and, in conjunction with the English Department, put together a digital literary magazine for the school. The basis of our graphics creation will be Photoshop, but we may also explore other aspects of CS2 (Illustrator, PageMaker, etc.) as our needs evolve. We will also be heavily involved with digital photography, as our staff will take all (most) yearbook photos and do the subsequent editing, etc. This course will be limited to 10 Upper School students per semester (or be based on the number of computers in the Mac Lab).

Digital Film (Two Semesters, taught and enrolled in independently)

Semester One: The documentary.

Documentary filmmaking has quickly increased in popularity as amateur and professional artists alike take advantage of lower equipment costs and an increased demand for reality-based, unbiased storytelling.

This class offers an overview of digital documentary filmmaking. This class will cover philosophy, production and editing. It will address storytelling methods, research, scripting and interviewing techniques. This will be a mix of screenings and hands-on work, while focusing on what it takes to effectively tell documentary stories using digital media.

Semester Two: The mockumentary.

The mockumentary film grows out of the documentary tradition. Instead of pretending to capture reality, the mockumentary blatantly distorts reality and follows the rules of satire and parody. In addition to regular attendance, participation and timely preparation of assigned readings, students will be expected to respond in writing to the primary text, *Faking It*, and to the films screened. Participants will also complete a final project: a mockumentary video or a script for a mockumentary and a written artist's statement describing their goals.

Examples of the Mockumentary genre: *This is Spinal Tap*, *Waiting for Guffman*, & *Zelig*

DRAMA:

Acting Shakespeare

Acting Shakespeare will include the basics of all acting approaches: text, character and production. The class will read and analyze three plays: *Romeo and Juliet*, *The Winter's Tale*, and *Comedy of Errors*. Students will learn and perform monologues and short scenes. Shakespeare wrote for actors and for an audience. He gives the actor the opportunity to grow, express and find the enormous pleasure available in expressing great passion. This class is open to all students. No experience necessary. This will be great preparation for our spring production of *Romeo & Juliet*. If you don't like Shakespeare, yet, this is the class for you!

OTHER:

Psychology Class

We will pursue, in greater depth, a few topics from within a traditional Psychology 101 curriculum: Emotional Intelligence, Abnormal Behavior (Psychological Disorders and Treatment) and States of Consciousness (Waking, Sleep and Dreams, Hypnosis, Drugs, Near-Death). The class will include regular short readings, research, film, discussion, experiential learning, service learning and written assignments

Computer Applications (Fall semester)

In this course students will work on developing proficiency with word processing, presentation, spreadsheet, and graphics applications, and become familiar with various email and Web browsing tools. They will also use peripherals such as the scanner and the digital camera. On the World Wide Web the class will evaluate websites for both content and design, find and download interesting files, and work on research methodologies. Students end up by designing and creating their own websites to learn how to present information in an organized fashion on the web. The class is project-based, which is to say, the grades are based mainly on these in-class projects which utilize and display mastery of the skills needed to develop. All the work is done in class, so there is no homework, and the projects are expected to be as simple or as complex as the ability of the individual student dictates, so the course is appropriate for almost any level of proficiency. Along the way, students will also fulfill the Tandem Computer Skills graduation requirement. Open to students in grades 9-12.