## Welcome to ATDP

nary 2016
ER THE PAST 35 YEARS, students have come to the UC Berkeley campus
DER THE PAST 35 YEARS, students hare computer programming, law, precalculus,解 biotechnology, and so much more you seek to join ATDP for the first time, welcome. ald the same: to welcome youth from all Over the decades, our goals have always remained the sur students to think and understand backgrounds into an academic community; through levels of study. We offer courses deeply; to encourage them to rise rapidly throughtanding public and private school appropriate to our students' needs, taught res and industry professionals.
instructors, as well as university researcademically talented students: how they develop,
We also endeavor to learn more about academicallal pace and to their appropriate depth, what they require in order to learn at their social development. Toward that goal, we and what factors support or impede their socials to participate in research studies and we sometimes ask our students and the solicit their insights Our application process ref in a variety of ways. By requiring applicy and admit a diverse to present their strength academic achievements, we are able to ide you consider the wide range indicators of their aca-working, highest-achieving students. Fill find many that spark your group of the hardest-working, higherlog, we hope that you will find many that spark your of classes offered in this year's catalog, we hope

## interest.

Thank you for your interest in ATDP.

## Sincerely,



Lisa Kala
Program Director

PROGRAM DATES
June 20 to July 29, 2016
See back cover for important
dates \& deadlines

## LOCATION <br> UC Berkeley campus

## WEEKLY SCHEDULE

 5-unit classes: 2 days per week 10-unit classes: 3 days per week
## DAILY SCHEDULE

Morning classes: 8:30 a.m. to noon Afternoon classes: 1:00 to 4:30 p.m.

FEES
Application processing fee: $\$ 50$
5-unit courses: \$650-\$800
10-unit courses: \$950-\$1100
AP Biology: \$1500

## DISCOUNTS

Sibling discount: \$35 per sibling attending Limited need-based financial aid is available

# Contacting ATDP 

EMAIL atdpoffice@berkeley.edu
WEB atdp.berkeley.edu

## FACEBOOK facebook.com/ucb.atdp

PHONE 510-642-8308
FAX 510-642-0510

MAIL University of California, Berkeley Academic Talent Development Program Graduate School of Education 70 University Hall Berkeley, CA 94720-1160

Or drop by our office between 9:30 and 5 ; we welcome visitors!

University Hall is located at 2199 Addison St. in Berkeley.

> ATDP's Secondary Division, administered through UC Berkeley's Graduate School of Education, offers challenging courses to highly motivated students who have completed Grades 7-11

## (and are entering Grades 8-12). Students are invited to attend the program on the basis of exceptional academic talent.

Classes are held in buildings across the UC Berkeley campus, with many scheduled at the Graduate School of Education's Tolman Hall in the northwest corner of campus.

ATDP's course offerings cover a wide variety of disciplines. Instruction is fast-paced, and expectations are high-each six-week course is designed either to cover a semester's worth ( 5 units, or 7.5 school days per class session) or a year's worth ( 10 units, or 10 school days per class session) of material. The number of hours of homework per ATDP class session is commensurate with the number of school days that the class covers and is provided below each course description on pp. 5-12.

ATDP is committed to supporting gender, ethnic, and socioeconomic diversity in all of its programs.

## WHO ARE ATDP STUDENTS?

ATDP's goal is to select students who will benefit from the challenging course offerings and will succeed in this fast-paced program. Students are eligible to attend ATDP's Secondary Division once they complete Grade 7 and can return each summer through the completion of Grade 11. Students become ineligible for ATDP when they complete Grade 12.

On average, admitted students have scored in the advanced range on the California Standards Test (CST) or above the 90th percentile on a nationally standardized achievement test in both mathematics and English Language Arts or reading. Additionally, ATDP students tend to earn an overall academic grade point average (GPA) of at least 3.5 on an unweighted 4-point scale. Please remember that these are not hard-and-fast selection criteria, but rather general guidelines. Designation as "gifted" at your home school is not required for admission to ATDP. Students with marks of "unsatisfactory" or "needs improvement" in conduct or citizenship are not a good fit for the program.

## WHO ARE ATDP FACULTY?

Our faculty include exceptionally talented public and private school instructors, as well as university researchers and industry professionals. In addition to their excellence as classroom instructors, they share a serious commitment to the education of gifted and talented youth. The low teacher-to-student ratio, as well as the counseling and administrative staff support, ensure instruction of the highest quality.

## Courses

Courses \& Credit
Selecting a Course
Course Descriptions

# Unlike many other summer programs, ATDP offers courses that focus on acquisition of deep knowledge in a single topic. Secondary Division students are invited to immerse themselves and gain expertise in a subject that interests them. Some ATDP classes are designed to accelerate students through high school curricula. While ATDP does not provide credit for its courses, many high schools accept our recommendation of credit and will list ATDP classes on their transcripts. 



## About ATDP Courses

## SCHEDULE \& SIZE

ATDP offers courses that meet either two or three days each week for six weeks. A course that meets two days per week carries 5 units of credit and contains the curricula and workload of a one semester high school course ( 90 days of school work). A course that meets three days per week carries 10 units of credit and contains the curricula and workload of a two semester (i.e., full school year) course (180 days of school work). Classes generally have a cap of 20 to 24 students.

## WORKLOAD

An ATDP course requires a serious time commitment. Students should expect to spend between three and ten hours preparing for each class meeting. The average number of hours of homework to expect per class meeting is listed below each course description (pp. 5-12) and new students especially should expect to be spending time on homework that is at the upper end of the range provided.

## CREDIT

ATDP recommends credit, but only the student's school may grant credit for an ATDP course. Only courses that have been placed by the high school on the student's high school transcript can be used to meet college entrance requirements. We mail a grade report to a student's school upon the student's request and only when credit is recommended. Any report that does not carry a credit recommendation is mailed only to the student's home. (See "Final Evaluation," p. 15.)

ATDP recommends high school credit for students who have demonstrated mastery of a course with a grade of A or B. For grades of C and below, we assign a Pass or No Pass mark with no credit recommendation. An ATDP course can be considered for hon-ors-level credit. Advanced Placement courses at ATDP are identified as such in their titles and should also carry appropriate credit.

Please check with your principal or guidance counselor before applying if credit is a concern.

## EXPLORATIONS

In addition to its regularly scheduled courses, ATDP offers through its Explorations program a selection of optional classes, workshops, and trips. These activities enrich Secondary Division students' summer experience with opportunities to learn new skills, to pursue career-oriented interests, and to visit interesting places. Last year's Explorations included series in SAT preparation, mobile app development, and neuroscience, as well as single-day options such as CPR training and special tours of campus departments.

Explorations are generally held on Wednesdays or Thursdays. They vary in length from three to six hours, and meet between one and five times. The Explorations program guide and enrollment form will be sent to students along with their notification of acceptance into ATDP. Only students currently enrolled in ATDP courses may attend Explorations.

## Selecting a Course

With nearly 40 different courses to choose from, it is sometimes difficult for students to find the one course that is just right for them! We encourage you to read through the course descriptions (pp. 5-12) carefully and identify courses that interest you and for which you are academically prepared. It is important to note course prerequisites and grade level requirements when you are selecting your course choices, as not all courses are open to all students. In addition to selecting the course that you are most interested in taking, you may select up to three other courses as alternatives.

## CHOOSING A WRITING COURSE

Applicants sometimes have trouble figuring out which writing course is most appropriate for their skill level, age, and grade. After carefully reading the course descriptions, list your course selection and alternate choices on your application. Based on your academic product, grade, age, and Letter of Interest, we will place you in the most appropriate class.

## CHOOSING A MATH COURSE

Accelerated mathematics courses have rigid prerequisites and a special application process. These courses are marked with the $\omega$ symbol next to their descriptions on pages 8 -9. See page 9 for details.

## ADVANCED PLACEMENT

Courses designated as "Advanced Placement" are especially rigorous 10 -unit courses designed to prepare students for the AP exam in the subsequent spring. Take special note of these courses' prerequisites and anticipated homework time per class meeting.

## APPLYING FOR TWO COURSES

Only students with strong academic backgrounds are allowed to take two courses, and new Secondary Division students (including those who previously attended ATDP's Elementary Division) are less likely to be allowed to enroll in two courses. Remember that expectations are high in every ATDP course, and many former students have reported that taking two courses was more time-consuming than they expected. Add together the two courses' Estimated Weekly


Hours listed on page 4 for an approximate time commitment.

If you are interested in enrolling in two courses, you must petition to do so in your Letter of Interest that accompanies your application. The petition should explain your summer plan: clearly identify your desired schedule of two courses, making sure their meeting times do not conflict, as well as any alternatives (single courses or other two-course combinations) in order of preference. Also describe how you plan to manage time commitments outside of class meetings. Successful petitions tend to be for two 5 -unit courses, or one 5 -unit and one 10-unit course.

Will my school accept ATDP's recommendation of credit?

Many—but not all—high schools have accepted our recommendation in previous years. As school and district policies vary, make sure to check with your school's administration first if you hope to receive credit for an ATDP course.

## Do ATDP courses count towards college entrance requirements?

If your school has accepted ATDP's recommendation of credit, it should appear on your high school transcript and will count towards college entrance requirements.

Is the time listed for homework accurate, or is that just how long it takes other students who aren't as smart as I am?
The homework hours listed represent the average time to complete homework (not including studying) reported by the previous year's classes. It is safe to expect that the amount of homework you do will be somewhere within the range given.

## I have only one course choice. Do I still have to list alternate classes on my application?

Each course you request represents a commitment on your part. If you would rather not come to the program than attend a course other than your first choice, you should request your first choice only.

## Will I improve my chances of being placed in my first choice class if I don't list alternates?

No. We always start by attempting to place a student in his or her first choice and only look at the alternates if the class is filled or if a student's application is not competitive for his or her first choice.

## Cotrse That

See details for each course and course section in their respective descriptions on pp. 5-12.


[^0]Each course is offered in one or more sections, listed with the following information (instructors listed as "Staff" are yet to be determined):

## Course Title



## The Writing Process

| SD3600.1 | M \& Th | 8:30-12:00 | Amy Frary |
| :--- | :--- | :--- | :--- |
| SD3600.2 | M \& Th | 1:00-4:30 | Amy Frary |
| SD3600.3 | Tu \& F | $8: 30-12: 00$ | Staff |
| SD3600.4 | Tu \& F | $1: 00-4: 30$ | Staff |

This course is meant for students who are mastering their middle school writing skills and transitioning to high school. Students will investigate the purposes for which authors write and will become purposeful readers and writers. Lessons and activities will focus on the process of writing: pre-writing, drafting, editing, and revising. Students will work in editing groups, help each other revise drafts, and study the qualities of good writing. They will learn techniques for crafting well-written sentences, logical paragraphs, and coherent essays. Students will read, study, and discuss writing styles, and they will practice what they have learned in numerous writing assignments.
Grade Requirement: For students completing grade 7 or 8 in June 2016.
Homework per class meeting: 2-5 hours
Recommended credit: 5 units
Tuition: $\$ 650$ ( $\$ 570$ base tuition $+\$ 80$ facilities fee)

## Reading for Creative Writing

SD3602 Tu \& F 1:00-4:30 Sarah Schwartz
This class will focus on reading critically and passionately and on fostering creative writing skills. Students will read poetry, short stories and other works of literature, and write responses to the readings. They will visualize the imagery and explore the themes of literature in relation to their own lives. For more inspiration, class activities may include drawing and art, campus explorations, and a visit to a local museum. Students will share their insights into the mind of the author and seek to understand their own writing processes. Through improvisation, class discussion, and writing exercises, students will learn to identify and experiment with various narrative techniques.

They will develop a portfolio of their own creative writing and will also write one analytic essay that will reflect their growing expertise as readers and writers.
Grade Requirement: For students completing Grade 7 or 8 in June 2016.
Homework per class meeting: 2-5 hrs.

## Recommended credit: 5 units

Tuition: $\$ 650$ ( $\$ 570$ base tuition $+\$ 80$ facilities fee)

| Writing for High School |  |  |  |
| :---: | :---: | :---: | :---: |
| S03603.1 | M\&Th | 8.30-12:00 | Javer Huer |
| S03603.2 | M\&Th | 1:00-4.40 | Gabriela wyatt |
| 503603.3 | Tu\& F | 8.30-12:00 | Jereny Grossman |
| 503603.4 | Tu\& F | 1:00-430 | Jereny Grossman |

This class will provide a vehicle for students to sharpen their high school level reading and writing skills. Through reading, class discussions, and group work, students will learn how to develop arguments to answer complex questions and then support their original and insightful claims with sufficient and significant evidence. Further, they will analyze their selected evidence so as to prove their claims in each paragraph and in the essay overall. Emphasis will be on learning to refine thinking and on improving writing through careful outlining, reflection on a writing rubric, revision, and peer feedback. Writing will be balanced evenly between collaborative paragraphs or paragraph parts and individual writing leading to more complete works.
Grade Requirement: For students completing Grade 8 or 9 in June 2016.

Homework per class meeting: 3-6 hrs.
Recommended credit: 5 units
Tuition: $\$ 650$ ( $\$ 570$ base tuition $+\$ 80$ facilities fee)

## Analytical Writing

| SD3604.1 | Tu \& F | 8:30-12:00 | Elizabeth Scherman |
| :--- | :--- | :--- | :--- |
| SD3604.2 | Tu \& F | 1:00-4:30 | Jonathan Shelley |

This course, taught at the advanced high school level, will allow students to strengthen their analytical reading and writing skills. Students will practice reading with care and will hold meaningful discussions about the texts they study. They will learn to produce well-organized, well-written, well-developed, and intellectually complex essays. They will perform the stages of writing from clarification of the assignment to final revision, working on grammar, composition, and editing.
Grade Requirement: For students completing Grade 9 or 10 in June 2016.
Homework per class meeting: 3-5 hrs.
Recommended credit: 5 units
Tuition: $\$ 650$ ( $\$ 570$ base tuition $+\$ 80$ facilities fee)

## Writing for the Sciences

SD3605 M \& Th 8:30-12:00 Elizabeth Scherman
NEW COURSE: This course is designed to prepare students for college-level STEM (Science/Medicine, Technology, Engineering, and Mathematics) coursework and careers. From Leonardo da Vinci to Steven Hawking, great scientists, engineers, mathematicians and inventors must be able to put their vision into words. Writing for the sciences demands original thought, critical research, and concise technical skills. Students will learn from the works of scientific writers and will write for specific, real-life audiences, using a variety of media platforms and rhetorical structures. Students will have the opportunity to explore their own individual interests as well as participating in collaborative projects. The writing skills students will develop, including composition and revision, will help not just in science but also in other subjects.
Grade Requirement: For students completing Grade 9 and up in June 2016.
Homework per class meeting: 3-6 hrs.
Recommended credit: 5 units
Tuition: $\$ 650$ (\$570 base tuition $+\$ 80$ facilities fee)

## Advanced Creative Writing

SD3606 $\mathrm{M} \&$ Th 1:00-4:30 Alex Franklin
This course will focus on purposeful reading and developing advanced creative writing skills. Students will read short stories, poems, and a couple of novels, discuss the form and purpose of meta-fiction, and revise their writing through class workshops before presenting their finished work. Students will revise and craft tone so that they can assure a reader, "This narrative came from a living, breathing, thinking being." In their clever meta-narratives, students will also learn to be mindful not to trample on the purpose, message or content of their stories.

Grade Requirement: For students completing Grade 9 and up in June 2016.
Homework per class meeting: 2-5 hrs.
Recommended credit: 5 units
Tuition: $\$ 650$ ( $\$ 570$ base tuition $+\$ 80$ facilities fee)

## Writing for College

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SD3607 Tu &F 8:30-12:00 Aileen Liu
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Students in this course will prepare for college-level work by applying their critical reading, thinking, and writing skills to a range of topics. They will develop research and writing skills necessary to succeed beyond high school, and they will practice writing in the different registers and genres of academic fields at the college level. Students in this course
should already have mastered writing for high school and will challenge themselves to synthesize information from a variety of sources in order to arrive at thoughtful and original conclusions. Through focused revision and editing, students will be able to craft clear, purposeful contributions to their fields of study.

Grade Requirement: For students completing Grade 10 or 11 in June 2016.

Homework per class meeting: 3-6 hrs.
Recommended credit: 5 units
Tuition: $\$ 650$ ( $\$ 570$ base tuition $+\$ 80$ facilities fee)

## Advanced Reading \& Writing

SD3608 Tu \&F 1:00-4:30 Christina Büchmann

This is a course for people who enjoy literature and analytic discussion so much that they want to become superb at these activities. Students will be expected to tackle complex works of literature with relish-texts will include a contemporary novel, a Shakespeare play, poems, and personal essays. Students will work not only at their analytic essay writing, but also at leading discussion. We will emphasize close reading and precise writing, and
from this students' own writing will emerge more fluidly with greater clarity and impact. The course is both preparation for reading literature in college and for doing well in AP English literature courses.
Grade Requirement: For students completing Grade 10 or 11 in June 2016.
Homework per class meeting: 3-6 hrs.
Recommended credit: 5 units
Tuition: $\$ 650$ ( $\$ 570$ base tuition $+\$ 80$ facilities fee)

## Fundamentals of Art

SD3611 Tu \& Th 8:30-12:00 Annie Yi
This course is a comprehensive, in-depth study of the fundamentals of the arts. Students will develop observational and drawing skills through the use of a variety of media and subject matter. We will be covering a range of techniques adaptable to any student level, using various media including pencil, ink, charcoal, pastel, watercolors, paint, collage and printmaking. Students will explore their imagination and creativity through the investigation of themselves in self-reflections and use the basic concepts of art as knowledge to develop their ideas. Students will create multiple projects that reflect the arts as a part of their lives, viewing art in perspectives and problem solving through expression to create art as a lifelong skill. This hands-on studio class involves group and individual instruction to encourage multiple ideas and creativity.
Grade Requirement: Open to all qualified SD students.

Homework per class meeting: 2-4 hrs.
Recommended credit: 5 units
Tuition: \$700 (\$570 base tuition $+\$ 130$ facilities fee)


## Architectural Desigh

SD3615 M W F 8:30-12:00 Ayda Melika
This course explores the built environment and introduces students to the architectural profession. The class focuses primarily on the formal principles of architectural design by examining examples from lectures and by visiting buildings on and off campus. Students will also develop an understanding of concepts in two-dimensional composition, furniture design, landscape architecture, and urban planning. Students will express their ideas in scaled models and drawings. The course consists of several week-long projects, including architectural drawings of existing buildings, abstract sculptural design, furniture design, and designing new landscape and architectural structures. While working individually and in teams, students will be able to explore their creative potential and develop their ability to work effectively in groups. Knowing how to draw or build models is not a prerequisite.
Grade Requirement: For students completing Grade 8 and up in June 2016.
Homework per class meeting: 3-5 hrs.
Recommended credit: 10 units
Tuition: $\$ 1000$ ( $\$ 850$ base tuition $+\$ 150$ facilities fee)


## First-Year Japanese <br> SD3623 M W F 8:30-12:00 Junko Hosoi

This course is based on a fun, playful, and effective approach to learning Japanese. This method is a synthesis of many innovative teaching techniques developed to help accelerate students' language learning. The two major components of this course are: (1) acquisition of basic communication skills of elementary Japanese and (2) learning hiragana and katakana syllabaries as well as some kanji characters. The language is taught multi-modally: lots of
physical movement, use of pictures and graphics, conversation practices, story telling, and some story creating. Students also learn about modern Japanese life. This course is equivalent to one year of high school Japanese.
Grade Requirement: Open to all qualified SD students.

Homework per class meeting: 2-6 hrs.
Recommended credit: 10 units
Tuition: $\$ 950$ ( $\$ 850$ base tuition $+\$ 100$ facilities fee)

## Second-Year Japanese

SD3624 M WF 1:00-4:30 Staff
Using a multi-modal approach, the class will begin where First-Year Japanese left off. The course will include a comprehensive review of katakana and kanji that students have already learned, and the introduction of much more kanji. Emphasis will be placed on consolidation of listening and speaking skills; the additional grammar and constructions will advance students' understanding even further. In addition to our focus on learning the language, students will learn about culture and customs in contemporary Japanese life. This course covers the full content of second-year high school Japanese.
Prerequisite: Completion of First-Year Japanese or permission of the Director.
Grade Requirement: Open to all qualified SD students.

Homework per class meeting: 2-6 hrs.
Recommended credit: 10 units
Tuition: $\$ 950$ ( $\$ 850$ base tuition $+\$ 100$ facilities fee)

## Third-Year Japanese

SD3626 M WF 1:00-4:30 Staff
In addition to furthering the development of listening and speaking skills, this course will also review grammar for advanced reading and writing. Students will add to their vocabulary of kanji and will study literary works. Cultural presentations will provide additional opportunities to learn about Japanese life and to practice language skills and conversation. This course covers the full content of third-year high school Japanese.

Prerequisite: Completion of Second-Year Japanese or permission of the Director.

Grade Requirement: Open to all qualified SD students.

Homework per class meeting: 2-6 hrs.
Recommended credit: 10 units
Tuition: \$950 (\$850 base tuition $+\$ 100$ facilities fee)


COMPUTER SCIENCE [THLTME后

## Access to a desktop or laptop computer (i.e. not a tablet or Chromebook) and to the Internet outside of class is required to complete homework for all computer science courses.

## Elements of Web Design <br> The Internet Classroom

SD3633 M W F 8:30-12:00 Samuel Pierce
In this course, students will learn to combine computer code with graphic design to create their own websites. No programming experience is necessary; students begin with the concept of syntax and character encoding. They will become familiar with computer networks and file systems as they build standards-based web pages from the ground up using HTML5 and CSS. Students should be prepared to flex their creative muscles: coding topics will be balanced with a discussion of good visual design and layout, including digital graphics production and manipulation using Adobe Photoshop. They will also explore the Internet as a ubiquitous social medium through ideas such as anonymity, intellectual property \& copyright, and viral trends. This course provides the necessary foundation for students who want to continue on to contemporary web/mobile app development.

Grade Requirement: Open to all qualified SD students.

Homework per class meeting: 2-5 hrs.
Recommended credit: 10 units
Tuition: $\$ 1100$ ( $\$ 900$ base tuition $+\$ 200$ facilities fee)


Introduction to Programming Solving Problems with Python
SD3634.1 Tu \& Th 8:30-12:00 Staff
SD3634.2 Tu \& Th 1:00-4:30 Staff
This beginning programming course will introduce students to the central ideas of computer science using the language Python. No programming experience is necessary. This course touches on many of the main ideas in AP Computer Science Principles, such as abstraction, algorithms, and the societal impact of computing. We will learn about common control structures, including logic statements and loops, as well as simple data structures. The course presents students with common programming problems, includes computational and critical thinking skills, and engages students in the creative aspects of the field.

Prerequisite: None; completion of Algebra I is recommended.
Grade Requirement: Open to all qualified SD students.
Homework per class meeting: 2-5 hrs.
Recommended credit: 5 units
Tuition: \$800 (\$600 base tuition $+\$ 200$ facilities fee)


## Programming in Java

| SD3635.1 | M W F | 8:30-12:00 | Anh Nguyen |
| :--- | :--- | :--- | :--- |
| SD3635.2 | M W F | 1:00-4:30 | Anh Nguyen |
| SD3635.3 | M W F | $8: 30-12: 00$ | James Brotsos |

This course will introduce students to object-oriented programming in Java. Programming experience is helpful but not necessary; students applying for this course must already feel comfortable with file systems, rules of syntax, and mathematical thinking, particularly the ideas of variables and functions. In the first part of the course, we will review procedural scripting basics before learning about object-oriented structures like classes. We will learn how to process data
structures like arrays and lists with searching and sorting algorithms to create powerful programs. During the second part of the course, students will demonstrate their creative skills through various projects that explore advanced applications, such as artificial intelligence or graphic user interfaces.
Prerequisite: Completion of Algebra I required. Completion of an introductory computer science course recommended.

Grade Requirement: Open to all qualified SD students.

Homework per class meeting: 3-6 hrs.
Recommended credit: 10 units
Tuition: $\$ 1100$ ( $\$ 900$ base tuition $+\$ 200$ facilities fee)

## Web Development

The Advanced Internet Classroom
SD3637 Tu \& Th 8:30-12:00 SMcDonald \& S Pierce
Want to build your own online store, mobile-friendly chatroom, or even your own Facebook? This course will teach students how to build complex, dynamic websites using PHP and jQuery. This course expands on the concepts in Elements of Web Design and computer programming classes. Students will become familiar with several new languages and the basics of database design. Particular attention will be paid to the reading and comprehension of programming APIs, allowing students to continue to grow as independent computer scientists.
Prerequisite: Completion of Elements of Web Design and a programming class (such as Programming in Java), or equivalent coursework, or permission of the Director.
Grade Requirement: Open to all qualified SD students.

Homework per class meeting: 2-3 hrs.
Recommended credit: 5 units
Tuition: $\$ 800$ ( $\$ 600$ base tuition $+\$ 200$ facilities fee)


## Foundations of Algebra

SD3640 Tu \& F 8:30-12:00 Claudia Benedetti
This course is designed to strengthen and develop skills that are essential for students who will be entering an Algebra I course in the fall. We will study strategies for problem solving, patterns and functions, probability, graphing, equations, properties, exponents and geometric thinking. During the six-week course, we will identify individual student curricular needs and then design instruction to challenge all students in the class. Students will approach problem-solving using a scientific approach: defining the problem, making predictions and hypotheses, testing assertions, using algebra to generalize from specifics, making conclusions and supporting them with logical argument and proof. Working with the Common Core Curriculum, proofs will entail writing the process of the solution in complete form, thus demonstrating students' mastery of the curriculum. This class is for students who have not taken Algebra I.
Grade Requirement: For students completing Grade 7 or 8 in June 2016.

Homework per class meeting: 2-5 hrs.
Recommended credit: 5 units
Tuition: $\$ 650$ ( $\$ 570$ base tuition $+\$ 80$ facilities fee)

## Algebral

SD3641 M WF 8:30-12:00 Staff
This six-week course covers a full year of Algebra I and is aligned with Common Core standards for high school Algebra classes. Topics to be covered include patterns and graphs; writing and solving equations; numeric, geometric, and algebraic ratios; slopes and rates of change; linear functions and graphing; factoring quadratics and other polynomials; systems of linear equations and inequalities; radicals and exponents; rational and irrational numbers; and graphing quadratic functions and finding roots. Students frequently spend eight hours outside of class preparing for each class session. The atmosphere of the class is cooperative; the emphasis is on working together.
Prerequisite: Completion of Pre-Algebra, grade of A in current math class, Teacher Recommendation Form completed by current math instructor, and passing score on placement test.
Homework per class meeting: 4-8 hrs.
Recommended credit: 10 units
Tuition: \$1000 (\$850 base tuition + \$150 facilities fee)

## Applying for an accelerated math course

If you are interested in taking an accelerated mathematics course (i.e., Algebra I, Geometry, Algebra II/Trigonometry, Precalculus: marked with the symbol), please note the following admissions requirements:

- You must have a grade of A in your current mathematics class, and a strong academic profile overall;
- You cannot repeat a math course you have already taken;
- Your Teacher Recommendation Form must be completed by your current mathematics teacher; and,
- You must take and pass the diagnostic examination given on the afternoon of Saturday, May 21, 2016.

As noted above, acceptance and placement into all accelerated mathematics courses is contingent upon successful passing of a
written diagnostic test. If you are unable to take the test on May 21 , the acceptance letter will provide instructions on scheduling a date for a makeup test.

Students who do not pass their placement test remain admitted to the program. We will work with these students to find a more suitable course placement. Please note that these additional admissions requirements pertain to students applying for accelerated mathematics courses only; they do not pertain to Foundations of Algebra or Introduction to Geometric Thinking. Students in Foundations of Algebra do need to take the diagnostic test on May 21, but their score will have no effect on their final placement.

The diagnostic test is for placement purposes only. Families may be informed of a total percentage score as it relates to placement criteria, but detailed results will not be available.

## Introduction to <br> Geometric Thinking <br> SD3642 Tu \& F 1:00-4:30 Claudia Benedetti

This course is designed for students who want to preview selected topics from high school Geometry. The approach is informal, with hands-on activities that will allow students to explore geometric concepts. Through a variety of techniques such as cooperative learning, the discovery method, and model-making, students will learn about the major concepts of Euclidean geometry. Students will work on a number of special projects such as tessellations. This course will give students the confidence and background to perform well in the regular or honors Geometry courses at their schools in the fall.
Prerequisite: Completion of Algebra I.
Homework per class meeting: 2-5 hrs.
Recommended credit: 5 units
Tuition: $\$ 650$ ( $\$ 570$ base tuition $+\$ 80$ facilities fee)


| Ceometry |  |  |  |
| :--- | :--- | :--- | :--- | :--- |
| SD3644.1 | MWF | 8:30-12:00 | Nakia Baird |
| SD3644.2 | MWF | 1:00-4:30 | Nakia Baird |

This fast-paced course completes all topics of first-year Geometry: points, lines, planes, and angles; deductive reasoning; parallel lines and planes; congruent triangles; quadrilaterals; inequalities in geometry; similar polygons; right triangles; circles; constructions and loci; areas of plane figures; areas and volumes of solids; coordinate geometry; transformations; and an introduction to trigonometry. Because the course covers a full year of Geometry, students spend at least eight hours outside of class preparing for each class session.
Prerequisite: Completion of Algebra I, grade of A in current math class, Teacher Recommendation Form completed by current math instructor, and passing score on placement test.
Homework per class meeting: 8-10 hrs.

## Recommended credit: 10 units

Tuition: $\$ 1000$ ( $\$ 850$ base tuition $+\$ 150$ facilities fee)

## Algebra II/Trigonometry ,

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SD3645.1 M W F 8:30-12:00 Georgina Mountain
SD3645.2 M W F 1:00-4:30 Toby Jaw
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This extremely fast-paced course completes all topics of second-year Algebra with trigonometry: linear functions and relations; systems of linear equations and inequalities; quadratic functions and complex numbers; exponential and logarithmic functions; rational and irrational algebraic functions; quadratic relations and systems; higher degree functions and polynomials; sequences and series; graphing techniques; circular and trigonometric functions; and use of mathematical models for applications
and problem solving. Because the course covers a full year of material, students spend a great deal of time outside class preparing for each class session.
Prerequisite: Completion of Geometry, grade of A in current math class, Teacher Recommendation Form completed by current math instructor, and passing score on placement test.
Homework per class meeting: 8-10 hrs.
Recommended credit: 10 units
Tuition: $\$ 1000$ ( $\$ 850$ base tuition $+\$ 150$ facilities fee)

\section*{Precalculus " <br> | SD3646.1 | M W F | 8:30-12:00 | Philippe Henri |
| :--- | :--- | :--- | :--- |
| SD3646.2 | M W F | 1:00-4:30 | Philippe Henri |}

This fast-paced course will cover topics necessary for success in Calculus. The course has a strong problem-solving element, augmented by collaborate work which includes analyzing and critiquing proofs as well as developing student's ability and confidence to explain their work to peers. This course covers the following topics: elementary functions including graphing, composition, transformation and inverses; rational, exponential and logarithmic functions; trigonometric identities, trigonometry for right and non-right triangles, graphs of the trigonometric functions and their inverses; conics, polar coordinates, polar graphing, polar and exponential of form of complex numbers, roots of unity; series, parametric equations and vectors; introduction to limits and differentiation.
Prerequisite: Completion of Algebra II, grade of A in current math class, Teacher Recommendation Form completed by current math instructor, and passing score on placement test.
Homework per class meeting: 6-8 hrs.
Recommended credit: 10 units
Tuition: $\$ 1000$ ( $\$ 850$ base tuition $+\$ 150$ facilities fee)

## Public Speaking

| SD3650.1 | M \& Th | 8:30-12:00 | Staff |
| :--- | :--- | :--- | :--- |
| SD3650.2 | M \& Th | 1:00-4:30 | Laura Shefler |
| SD3650.4 | Tu \&F | 1:00-4:30 | Laura Shefler |

Students in this course will develop the writing and performance skills needed to become clear, compelling, confident, and persuasive public speakers. We will practice a variety of speaking styles, including impromptu (speaking "off the cuff" on a randomly selected topic), dramatic interpretation (of monologues from novels, plays, and films), debate (defending a position on a controversial issue), and oratory (a formal speech that seeks to inform, inspire, or persuade on a topic of your choice). We will also study, view, and analyze the performances of some of the most powerful orators of the past century. If you are seeking to reduce your anxiety about public speaking, this course provides a friendly, nonthreatening environment in which to increase your confidence. If you already enjoy public speaking, you will have an opportunity to enhance and practice your skills.
M \& Th Sections (SD3650.1 \& 50.2): For students completing Grades 6,7 , or 8 only.
Tu \& F Section (SD3650.4): For students completing Grades 9,10 , or 11 only.
Homework per class meeting: 2-4 hrs.
Recommended credit: 5 units
Tuition: $\$ 650$ ( $\$ 570$ base tuition $+\$ 80$ facilities fee)

## Social Psychology

SD3652.1 Tu \& F 8:30-12:00 Davin Duval
SD3652.2 Tu \& F 1:00-4:30 Davin Duval
Social psychology is the scientific study of the way people think about, feel, and behave in social situations. It involves understanding how people influence, and are influenced by, others around them. A primary goal of this course is to introduce you to the perspectives, research methods, and empirical findings of social psychology. We will use a collegelevel textbook along with supplementary readings to cover topics including: impression formation, conformity, pro-social behavior, interpersonal


attraction, persuasion, stereotyping and prejudice. Equally important is the goal of cultivating your skills for analyzing the social situations and events that you encounter in your everyday lives. Finally, throughout the course, emphasis will be placed on developing critical and integrative ways of thinking about theory and research in social psychology.
Grade Requirement: For students completing Grade 8 and up.
Homework per class meeting: 2-5 hrs.
Recommended credit: 5 units
Tuition: $\$ 650$ ( $\$ 570$ base tuition $+\$ 80$ facilities fee)

## The Practice of Law

SD3658.1 M \& Th 8:30-12:00 Gary Kitajo

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SD3658.2 M & Th 1:00-4:30 Gary Kitajo
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This course will provide an overview of social institutions and functions addressed in the practice of law. Students will participate in each of the lawyer's roles: investigation, research, advocacy, trial preparation, and dispute resolution. In the process, students will examine the nature and history of law, interrogate parties, argue hypothetical cases, and draft legal pleadings and documents. This class requires active participation in lively classroom activities and projects, which include simulated trials, oral argument, and case briefing. Students are encouraged to participate freely in robust classroom discussions and debates, with a premium placed on the open exchange of ideas and opinions. The course will culminate in a mock trial, conducted in a courtroom setting before a presiding judge.
Grade Requirement: For students completing Grade 8 and up.

Homework per class meeting: 2-5 hrs.
Recommended credit: 5 units
Tuition: $\$ 650$ ( $\$ 570$ base tuition $+\$ 80$ facilities fee)

## Philosophy

SD3660 Tu \& F 1:00-4:30 Alexander James
Philosophy derives from the Greek word 'philosophia' and means "love of wisdom." The Western philosophical tradition arose in ancient Greece out of the dialogues of Socrates, who famously remarked that the "unexamined life is not worth living for human beings." Ever since, philosophers have been occupied with the most basic questions of existence: Why is there something as opposed to nothing? What is the meaning of life? Is there a God? What is the nature of right and wrong? What is virtue? How can there be consciousness in the natural world? Is the brain a computer? Do the limits of intelligibility coincide with the limits of language? Is it possible to have knowledge of the external world? What's the difference between a law of logic and a psychological law? How should we make sense of the structure of biological life? In this course, we will explore these and other questions through a close reading of philosophical classics. We will read selections of texts by Plato, Aristotle, Descartes, Kierkegaard, Nietzsche, Heidegger, and Wittgenstein, along with contemporary investigations into the philosophical foundations of cognitive neuroscience.
Grade Requirement: For students completing Grade 8 and up.
Homework per class meeting: 2-4 hrs.
Recommended credit: 5 units
Tuition: $\$ 650$ ( $\$ 570$ base tuition $+\$ 80$ facilities fee)

## Advanced Placement Psychology

SD3661 M W F 8:30-12:00 Claire Kunesh

This course provides a rigorous introduction to the fundamental concepts in psychology and prepares students for the May 2017 AP examination in psychology. Topics include the neurological processes that lead to thought and behavior, the processes that allow people to sense and perceive information from the environment, sleep and dreams, behavior, sources of the motivation to act, emotional experiences, language, memory, human development across the lifespan, personality, psychological disorders, friendship, altruism, bias and discrimination, research methods, and statistics. The course uses a college textbook and requires that students do a significant amount of independent reading. Students come to class prepared to engage in interactive work, such as the analysis of case studies and current or historical events. Students also design and carry out an independent research project. In order to fully prepare students for the AP examination, students get ample practice answering AP-style questions.
Grade Requirement: For students completing Grade 9 and up; completion of $10^{\text {th }}$ grade recommended.
Homework per class meeting: 8-10 hrs.
Recommended credit: 10 units
Tuition: $\$ 950$ ( $\$ 850$ base tuition $+\$ 100$ facilities fee)

## Entrepreneurship

The Science of Building a Startup
SD3663 Tu \& Th 8:30-12:00 Sean Byrne
NEW COURSE: Startups are not just smaller versions of established businesses. Instead, they are research organizations that collect data and test a series of ever-changing hypotheses about what customers want to buy and how customers want to buy it. The experiment ends when the startup hits it big or runs out of money. Adapted from the Lean LaunchPad methodology taught at business schools and the National Science Foundation, this course will help you identify your initial hypothesis, develop tools to collect data from your customers, and revise or replace your hypothesis based on those data. This course will introduce you to the business model canvas as a way of describing a business and will cover other topics of interest to startup owners, such as pitching a business to venture capitalists and understanding financial statements.
Grade Requirement: For students completing Grade 9 and up.
Homework per class meeting: 2-5 hrs.
Recommended credit: 5 units
Tuition: \$650 (\$570 base tuition $+\$ 80$ facilities fee)

## Advanced Placement Economics

SD3664 MWF 1:00-4:30 Jon Schellenberg
Derived from the title of an ancient Greek treatise on household management, the word "economics" now describes a field of study that attempts to answer questions from how the government should fight pollution to why finding an apartment in San Francisco can be a nightmare. This course will prepare students for the May 2017 AP examinations in both Microeconomics and Macroeconomics. The course will be guided by the AP syllabi and will cover the following topics: basic economic concepts; supply and demand models; consumer choice; game theory; the theory of the firm; factor markets (markets of the ingredients of production, including land, labor, and capital); market failure; measures of economic performance; national income and price determination; the nature and functions of the financial sector; inflation and unemployment; economic growth and productivity; international trade and finance; fiscal and monetary policy; and the government's attempts (successful and unsuccessful) to make it all better.
Grade Requirement: For students completing Grade 9 and up; completion of $10^{\text {th }}$ grade recommended.
Homework per class meeting: 8-10 hrs.
Recommended credit: 10 units
Tuition: \$950 (\$850 base tuition $+\$ 100$ facilities fee)



## Introduction to Biotechnology <br> SD3671.1 Tu \& Th 8:30-12:00 Debbie Clark <br> SD3671.2 Tu \& Th 1:00-4:30 Debbie Clark

In this course, students will be introduced to the principles and techniques of molecular biology that are used to study and manipulate DNA in basic research, medicine, forensics, and agriculture. We will begin by studying the structure and chemistry of DNA, and we will then learn about many of the laboratory techniques used in recombinant DNA technology, including restriction digests, PCR, bacterial transformation, and immunological assays. In each class meeting, students will conduct hands-on experiments and learn about the real-world uses and implications of biotechnology. Additionally, students will complete weekly current events reports and examine the ethical considerations raised by advances in the field.
Grade Requirement: For students completing Grade 7 or 8.

Homework per class meeting: 3-5 hrs.
Recommended credit: 5 units
Tuition: $\$ 800$ ( $\$ 580$ base tuition $+\$ 220$ facilities fee)


## Introduction to Engineering

SD3672 Tu \& Th 1:00-4:30 Staff
NEW COURSE: The course is designed to give students an overview of diverse engineering disciplines-mechanical, electrical, and civilin order to find out what engineers actually do. Students will see the difference between "science" as the discovery of new knowledge and "engineering" as the uses of that knowledge in new environments. Students will practice their own engineering skills, finding out how things work in the real world through various projects and hands-on activities. The course will emphasize creative and analytical problem solving, hands-on building activities, design, and teamwork.
Grade Requirement: For students completing Grade 7 or 8.
Homework per class meeting: 3-5 hrs.
Recommended credit: 5 units
Tuition: \$800 (\$580 base tuition + \$220 facilities fee)

## Introduction to Chemistry

| SD3673.1 | Tu \& F | 8:30-12:00 | Rachel Eaton |
| :--- | :--- | :--- | :--- |
| SD3673.2 | Tu \& F | 1:00-4;30 | Rachel Eaton |

SD3673.2 TU \& F 1:00-4;30 Rachel Eaton
Throughout this course, laboratory activities and discussions will focus on how chemists describe matter and its changes within the context of alchemy and early chemistry. Understanding the periodic table, the particulate nature of matter, ionic compounds, and solution chemistry will provide the basis for students to think about the world in terms of particles and their interactions. This course provides a grounding in scientific principles, which will prepare students to continue on to a high school chemistry class.
Grade Requirement: For students completing Grade 8 and up.
Homework per class meeting: 3-5 hrs.
Recommended credit: 5 units
Tuition: \$800 (\$580 base tuition $+\$ 220$ facilities fee)

## Introduction to

Astronomy \& Astrophysics
SD3674 M W F 1:00-4:30 Daniel Licht

©NOTE: This course has a four-week schedule. It starts June 20 and ends July $1 \mathbf{5}$.
NEW COURSE: In this course, students will learn about many of the objects that make up our solar system and surrounding galaxy, as well as some of the physics responsible for the appearance, behavior, and interactions of these objects. Students will gain a basic understanding of the movement of celestial objects through the sky and astronomical tools such as telescopes, astronomical cameras, spectroscopy, space probes and orbital observatories. Specific topics include interactions of the Earth, Sun, \& Moon, Kepler's Laws and bodies of the solar system, types of stars, nebulae and stellar evolution, discovery of extrasolar planets, galactic structure, and basic cosmology. The course will include multiple observations of the sun and at least one late-night observation session or field trip.
Prerequisite: Completion of Geometry. Completion of Algebra II/Trigonometry recommended.
Grade Requirement: For students completing Grade 9 and up.
Homework per class meeting: 4-6 hrs.
Recommended credit: 5 units
Tuition: \$800 (\$580 base tuition $+\$ 220$ facilities fee)

## Advanced Biotechnology

SD3675.1 M W F 8:30-12:00 Jay Chugh

SD3675.2 M W F 1:00-4:30 Jay Chugh


NOTE: This course has a four-week schedule. It starts June 20 and ends July 15.
In this course, students will conduct advanced biotechnology experiments, including DNA extraction, PCR, bacterial transformation, and protein gel electrophoresis. Students will also research and design their own inquiry-driven experiments, which they can then continue during the school year in preparation for the science fair. Additionally, we will explore ethical and political implications of biotechnology; topics include genetically modified organisms, cloning, reproductive biotechnology, and stem cell research.

Prerequisite: Completion of high school Biology. Background in Chemistry recommended.

Grade Requirement: For students completing Grade 9 and up.
Homework per class meeting: 3-6 hrs.
Recommended credit: 5 units
Tuition: $\$ 800$ ( $\$ 580$ base tuition $+\$ 220$ facilities fee)

## Advanced Placement Bfology

SD3679 MWF 8:30-4:30 G Martinez \& E Thiel
This course provides an opportunity for students to accelerate their study of biology with an introductory college-level biology course and to prepare for the May 2017 AP examination in Biology. The course uses a college-level textbook and follows the College Board course outline. Laboratory work is extensive and will be included in each class session. Topics include Molecular and Cellular Biology (biochemistry, cells, energy transformations), Genetics and Evolution (genetics, molecular genetics, evolution), Population Biology (plant biology and animal biology, including that of humans), and Ecology.
Prerequisite: Completion of Algebra I and high school Biology, and a background in Chemistry.

Grade Requirement: For students completing Grade 9 and up; completion of $10^{\text {th }}$ Grade recommended.

Homework per class meeting: 3-10 hrs.
Recommended credit: 10 units
Tuition: \$1500 (\$1280 base tuition + \$220 facilities fee)



## Cognitive Neuroscience

SD3681.1 Tu \& Th 8:30-12:00 Paul Bulakowski
SD3681.2 Tu\&Th 1:00-4:30 Staff
Cognitive neuroscientists aim to answer one of the last remaining fundamental questions of science: how does a three-pound lump of organic materialthe brain-support such a wide array of functions, such as perception, thinking and reasoning, emotion, movement, and consciousness? Through active lectures, demonstrations, and hands-on activities, we will explore modern theories and applications of adult and developmental neuroscience, along with the research methodologies used (e.g., single unit recording, fMRI, EEG, psychophysics). We will use diverse college-level reading materials to introduce key topic areas of Cognitive Neuroscience, including cells and systems, sensation and perception, attention, learning and memory, emotion, and development. An end-of-year project will provide the opportunity to learn how to read and evaluate primary research articles directly from the scientists in the field and propose an experiment on a brain topic of special interest.
Prerequisite: Completion of high school Chemistry, Biology, or Psychology.

Grade Requirement: For students completing Grade 9 and up.

Homework per class meeting: 6-10 hrs.
Recommended credit: 5 units
Tuition: $\$ 650$ ( $\$ 570$ base tuition $+\$ 80$ facilities fee)

## REFUND POLICY

explanation with the tax returns in lieu of the payment.

All admission and placement decisions are made independently of financial aid status. Your application will not be held up pending a financial aid decision. However, we can only evaluate your request for financial aid once we receive all required documents. Financial aid decisions are based on total resources, not only on household income. Applicants who are accepted will be mailed notification of the amount of financial aid on March 31. Awards cover base tuition only; they do not cover transportation, textbooks, course facilities
fees or other expenses. Families who need to pay tuition in installments will have until July 29 to do so. Details will be included in the acceptance letter.

Instructions for applying for financial aid are on page 19.

A parent whose registered student is unable to attend must withdraw the student in writing and may request a tuition refund. Prior to Wednesday, May 18, 2016, tuition and facilities fee payments are refundable. After May 18, refunds are subject to the ATDP Refund Schedule, which will be included in the student's acceptance packet.

No refund will be made in the case of a student who fails to attend classes or is withdrawn from ATDP for failure to meet the standards of appropriate behavior, including completion of homework. The $\$ 50$ processing fee is also nonrefundable.


## Location \& Transportation

All SD courses are held on the UC Berkeley campus, which is conveniently located a short walk away from the Downtown Berkeley BART station and several AC Transit bus lines. Many families choose to carpool to campus, and information about carpools, BART meet-ups, and campus shuttles will be provided in the student's acceptance packet. For families driving to Berkeley, please visit UC Berkeley's Parking and Transportation website (pt.berkeley.edu) for parking details.

## THE ATDP MAIN OFFICE

Unlike many of our courses, ATDP's main office is not located in Tolman Hall (home of the Graduate School of Education). Please look us up at 2199 Addison Street in Berkeley to find University Hall. We are in room 70 on the ground floor.

## CARPOOL

For students and their families interested in forming carpools, ATDP provides an online directory of other students from their area who are also interested in carpooling. Families then contact each other and form their own carpools. The carpool directory is available only to students who have been accepted into the program, who have an online account, and who have opted into the directory themselves.

If you and a sibling or friend want to attend ATDP at the same time so that you can commute together, include the request in the Letter of Interest in both applications. Make certain that the schedules of the courses you each request match. The earlier you both apply, the more likely we will be able to work with your schedules.

## BART ORANGE

For Secondary Division students who prefer the convenience of BART to travel to and from campus, BART authorizes middle and high schools to resell discounted Orange tickets at half the price of a standard ticket. Because ATDP is not a middle or high school, we cannot sell these tickets. However, if a student is able to purchase these tickets at his or her own school, they may be used for transit to and from ATDP during the summer. BART Orange tickets do not expire and, if unused, may be returned to BART for a cash refund.

# Orientation \& Preparation 

## WELCOME \& ORIENTATION

The Secondary Division orientation will be held for students and families on Sunday, June 5 . This is a good time for accepted students to become familiar with the Berkeley campus, meet their instructor and their new classmates, ask questions of the ATDP staff, and find their classroom location.

## Attendance

## POLICY

There are no excused absences at ATDP. As expectations are high and courses are fastpaced, even one absence makes it difficult to keep pace. Therefore, students are expected to attend every class session. Missing too much class time for any reason may result in dismissal from the program without refund. Even in the case of unanticipated circumstances, there are some things that cannot be "made up" (such as introductions, class participation, group activities, presentations, or examinations, for example).

All matters affecting regular attendanceabsence, coming late, or leaving early-must be communicated in writing to the program

## TEACHER LETTER \& FIRST ASSIGNMENT

At the end of the orientation program, Secondary Division instructors will hand out an important letter to students that includes contact and course information. Most instructors will assign coursework to be completed prior to the first class meeting. This letter will be mailed home to students who do not attend the orientation.
office (not the instructor) by the parent/ guardian (not the student). If there are special circumstances that will affect a student's ability to attend every class, please contact the program office in writing before applying. Barring exceptional circumstances, students who anticipate missing classes will not be allowed to attend the program. Anticipated absences not addressed prior to the refund deadline will not be accommodated. A student's attendance record will be taken into account in admission decisions in subsequent years.

Students who miss class time may not be eligible for a recommendation of credit and

## TEXTBOOKS

Most course textbooks will be available for purchase at the Cal Student Store, starting from Orientation on June 5 until your first day of class. Some instructors will prepare a course-specific reader purchasable at Bancroft Copy Central. Please note that textbooks and students' supplies are not included in tuition.
may not receive a final evaluation. Attendance decisions are not related to whether the student is taking the class for a possible recommendation of credit. Attending every class does not guarantee that a student will be recommended credit.

## INDEPENDENCE DAY HOLIDAY

The UC Berkeley campus will be closed on Monday, July 4, 2016, in observance of Independence Day. Any course which is normally held on a Monday will have a make-up class session. Make-up classes will be determined and announced by individual course instructors.

## Final Evaluation

Upon completing a Secondary Division course, ATDP students will receive a final evaluation from their instructor. Printed on official UC bond paper, this document can be sent to schools as proof of course completion. It includes the instructor's narrative evaluation of student performance, final letter grade, and whether the student has earned a recommendation of credit. ATDP will send one copy home in August and, if authorized by you, one copy to a selected school at no charge.

ATDP cannot provide a transcript for any of its courses, and the final evaluation is generally not an acceptable substitute for a high school transcript. For more about ATDP's recommendation of credit, see "Credit" on page 2.

## THE APPLICATION PROCESS

We make every effort to place all qualified students in their first-choice course. ATDP makes placement decisions on a continual basis, beginning as soon as applications are completed. However, course enrollment is limited, and there are always more qualified applicants than the program can accommodate. Therefore, it is advantageous for both returning and new students to submit their complete applications early, preferably well before the postmark deadlines. Applications are evaluated in the order they are complete, with first preference in placement given to returning students. Incomplete applications are not considered for placement.

## NEW VS RETURNING

The application process is the same for new and returning students. Students must reapply every year, and returning students are not guaranteed automatic readmission or placement in their first choice of course-they must have maintained strong academic records and must submit their complete applications early. A student who applied in a previous year and then withdrew without completing a course will be considered a new student for admission purposes. Students who have attended the Elementary Division previously are also considered new students. Applications received after the deadline will be considered on a space-available basis.

## DEADLINES \& NOTIFICATION

ATDP evaluates applications continuously, in the order they are completed. The earlier you apply, the better your chances at receiving placement into your preferred course! To receive priority as a returning student, or to apply for financial aid, be sure your application package is placed into the mail on or before the postmark deadlines below.

POSTMARK DEADLINE

Mail your documents.

PLACEMENT MAILING
ATDP will send you an
acceptance decision...

## PLACEMENT DECISIONS

On March 31, 2016, ATDP will mail all applicants a letter informing them whether they have been accepted. Acceptance packets will include your course placement. Students have until Monday, May 2, 2016 to submit their Notification of Attendance or Withdrawal to indicate whether or not they will be attending the Secondary Division session.

See the table below and the calendar on the back cover for a more details.

|  | POSTMARK DEADLINE | PLACEMENT MAILING | TUITION DEADLINE |
| :--- | :--- | :--- | :--- |
| For applicants who are... | Mail your documents... | ATDP will send you an <br> acceptance decision... | You must accept or decline... |

R=TURNING
(attended SD before) by Wednesday, February $17 \quad$ on Friday, March $31 \quad$ by Monday, May 2

NEW or APPLYING
FOR FINANCIAL AID
by Wednesday, March 2
on Friday, March 31
by Monday, May 2

APPLYING LATE
within three weeks of the completed application
within two weeks of receipt of the acceptance decision

## Seeing these dates for the first time?

We publish our program dates and deadlines each year in the fall. Subscribe to our community newsletter at atdp.berkeley.edu/news or follow us on Facebook at facebook.com/ucb.atdp to receive notification as soon as they're available!

## APPLICATION INSTRUCTIONS IN 4 STEPS

## STrPP 1

CHOOSE A COURSE

STFP 2

GATHER DOCUMENTS

Browse our course offerings listed on pp. 4-13. Choose one course that interests you and up to three alternates. Make note of the listed course number and any grade requirements or prerequisites. Keep our attendance policy (p. 15) in mind as you review the course schedule. See "Selecting a Course" on page 3.

Course availability may change throughout the spring as courses fill. Check atdp.berkeley.edu/sd/catalog for updates.

Please compile the following items in the order listed below. Items numbered 1 through 5 are required for a complete application. We request you include College Board PSAT/SAT scores (item 6) if they are available, and federal tax documentation (item 7) if you wish to apply for financial aid.

## 1. Letter of Interest

Please write a cover letter to accompany your application, explaining your reasons for choosing each of the courses listed on your Application Information Form. In your (the student's) own words, include information about your interest in the subject(s), what you hope to learn, and related experience, if any. In this letter and on your Application Information Form, please only list courses in which you are actually interested in enrolling.

Your letter may also include any special circumstances, such as transportation or scheduling needs.

If you are applying for two courses, include your petition in your letter. Specify your desired course schedule, and explain your plan for managing the increased time commitment. See "Applying for Two Courses" on page 3.

Please do not send certificates or awards.

## 2. Teacher Recommendation Form

Give the Teacher Recommendation Form -attached between pages 10 and 11-along with an envelope to a current teacher in any academic subject (e.g., mathematics, science, language arts; not fine arts, advisory, or extracurricular classes). Your teacher should complete the form, seal it in the envelope, sign his or her name across the sealed flap, and then return the envelope to you.

If you are applying for Algebra I, Geometry, Algebra II/Trigonometry, or Precalculus, this form must be completed by your current math teacher.

## 3. Copy of Report Card

Submit a legible photocopy of your first semester (or most recent) report card for the current ('15-'16) school year.

We request that you send final grades, but if those are not available, you may submit your most recent progress report. Do not delay submitting your application to wait for final grades; if necessary, we may ask for an updated report card after receiving your application. If you need assistance obtaining a copy, ask in your school office.


## 4. Copy of Test Scores

Include a legible photocopy of your most recent California standardized test or other standardized achievement test scores (e.g., Stanford Achievement Test, Iowa Test of Basic Skills, or other school-administered test that gives national percentile scores). The test must have been taken within the past three years (i.e., 2015, 2014, or 2013) and include scores in the areas of math and reading/ELA.

Do not delay submitting your application to wait for more recent test scores. Include whatever acceptable test scores you have from the last three years.

We are aware that because of the transition from the Standardized Testing and Reporting (STAR) to the California Assessment of Student Performance and Progress (CAASPP) exam, no STAR or CAASPP results for math/ELA are available for the 2013-2014 school year. Applicants who do not have test results from 2015 should submit a copy of their 2013 test scores.

If you have not taken a standardized achievement test in the past three years, include a signed note with a school stamp from an administrative staff person at your school indicating so.

## 5. Academic Product or Essay

Please submit an academic product that meets the criteria of one of the three options below. This work should be one of which you are especially proud and which was completed since September 2015. While the work may have been done for a school assignment, it need not have been. The product you submit need not be in the same subject area as that to which you are applying, but keep in mind that the written component must develop your own original thinking beyond restating facts. If your product is more than one page, staple the pages together but do not staple them to the application or put them in a folder.

OPTION A. Submit an essay or story of at least 500 words that shows your original thought and that is long enough for you to develop your ideas. A social studies or science report is not appropriate unless it relies heavily on your own analysis in addition to reporting factual information.

OPTION B. If you'd like to submit a piece of academic work that deviates from a traditional essay or story format (e.g., art, poetry, computer programs, and science experiments), you must also submit a clear, well-developed explanation of your work. Your written explanation should be at least 500 words and must be long enough to clearly demonstrate your thinking as you developed this product.

OPTION C. Write a well-developed essay of no more than 1,500 words on one of the topics below. You may type or write in ink on lined paper. Take time to consider the topic in depth and organize your answer. Be sure to title your essay.

1. Albert Einstein once thought that the universe was a static size, not expanding. Charles Darwin suggested that creatures inherited a blend of each parents' entire set of traits. Despite providing modern science with foundational theories, both scientists' understanding was originally mistaken and evolved to become more complete. Describe a situation in which you or those around you believed something that turned out to be neither entirely true nor entirely false, but more complicated. In your essay, discuss how the experience changed your thinking process, and cite specific real-life examples of how one can work towards more complete knowledge.
2. Intercollegiate sports often make up a substantial part of a university's overall budget. In a well-developed essay, discuss the advantages and disadvantages of financially supporting collegiate athletic programs. Take a stance on this issue with supporting arguments and specific recommendations.


## STHP 3

FILL OUT THE APPLICATION FORM

## 5. Need-based Financial Aid (optional)

See page 13 for tuition \& financial aid information.
To apply for financial aid, please submit both parents' most recent Federal Tax Return AND ALL SCHEDULES (i.e., the complete tax return) for each applicant.

For preliminary consideration and to avoid delay in submitting your application, you may submit your 2014 return if your 2015 return is not yet available. We will ask for your 2015 return at a later date, if required.

Do not send original documents.
If there are special circumstances, submit a letter of explanation and photocopies of any supporting documents (e.g., unemployment forms).

If the $\$ 50$ processing fee poses a financial hardship, submit a letter of explanation and supporting documents listed above.

Send your complete application materials no later than Wednesday, March 2. We will not consider financial aid requests for applications that are completed after the financial aid deadline.

An invoice for fees due and the amount of financial aid awarded (if any) will be included in the student's acceptance packet, which will be mailed on Friday, March 31, 2016.

Please complete the Application Information Form at atdp.berkeley.edu/apply. Students who apply online can log in to check the status of their application at any time. Returning students need only update the information on their account (e.g., address, current school) when they reapply online.

Once you have submitted the online form, print and sign the Statement of Commitment and include it with the rest of your application documents (step 2).
If you are unable to access the form online, complete the Application Information Form (including the Statement of Commitment) attached between pages 10 and 11.



## APPLICATION COMPLETENESS CHECKLIST

Make sure you have included all required documents in the order below!

- Processing fee (\$50 check, payable to "UC Regents") on top of other documents OR Signed note of explanation if this poses a financial hardship
- Statement of Commitment printed and signed, if applying online OR Paper Application Information Form with signed Statement of Commitment, if not applying online
- Letter of Interest

Envelope containing your Teacher Recommendation Form, with teacher's signature over the sealed flap

- Photocopy of most recent report card
[ Photocopy of achievement test scores or signed, stamped note from school administrative staff indicating none are available
- Academic product or essay

D Photocopy of College Board PSAT and/or SAT scores, if available

- Federal tax return and all schedules, if applying for need-based financial aid

Include a \$50 processing fee, payable by check or money order to "UC Regents." Write "SD" and the student's first and last name on the memo line.

This fee is non-refundable. It covers only the cost of application processing and does not apply toward tuition or facilities fees.

One you have all of the required materials, place your processing fee payment on top of the rest of your documents (see checklist, previous page), and mail them in a single package to:

## University of California, Berkeley <br> Academic Talent Development Program Graduate School of Education 70 University Hall \#1160 Berkeley, CA 94720-1160

Only complete applications will be considered. Do not send the application in parts.

## Application FAQ

If admission is based on academic preparedness, why is applying early so important?
Applications are considered in the order in which they are completed. For the most competitive courses, there are always more qualified applicants than the program can accommodate. Highly qualified applicants who apply early have the best chance of being placed in their preferred courses at their preferred meeting times.

I didn't learn as much as I would have liked in my math class this year. Can I repeat a math class at ATDP that I have already taken at my regular school?

No, we do not allow ATDP students to repeat math classes. Instead, we suggest that you consider taking a 5-unit math elective for which you have completed the prerequisites or a course in another field of study.

How are financial aid awards determined?
Financial aid awards are based on total family resources, determined in part by tax returns and schedules. We make every effort to help families with limited resources; however, we are often unable to offer full financial aid, and families who receive full financial aid for tuition will still need to pay the course facilities fee.

## A drastic change in my financial situation is not reflected on my tax return. What should I do?

Attach a letter explaining your situation, as well as any supporting documents (e.g., unemployment forms) to the tax forms you send in.

## May 6th graders apply to the Secondary Division?

Our Elementary Division offers courses for 6th graders: see our Elementary Division catalog or atdp.berkeley.edu/ed. New ATDP applicants who will be completing 6th grade in 2016 are not eligible for the Secondary Division. Returning ED students with very strong academic records who will be completing 6th grade are eligible to apply for The Writing Process, Elements of Web Design, Foundations of Algebra, and Public Speaking.

## I'm not from the San Francisco Bay Area. May I apply?

Yes! ATDP is open to students from the Bay Area and beyond. Students from many countriesincluding Taiwan, Italy, Kuwait, and Singaporehave attended. However, please note that (1) ATDP is not a residential program and we cannot assist with housing arrangements, and (2) financial aid is limited to students from the immediate Bay Area.

## STAFF \& ADMINISTRATION



Elliot Turiel
Interim Dean
Graduate School of Education


Lisa Kala
Program Director


Frank C. Worrell
Faculty Director


PROGRAM STAFF
Left to right: Samuel Pierce, Cypress Lynx, Hila Peretz, Mildred Flores, Carrie Brown (Assistant Director), Stevie Jeung


## Tolman Hall

Graduate School of Education
University Hall
ATDP Main Office

## 2016 CALENDAR

| POSTMARK DEADLINES | Wed., February 17 Wed., March 2 | Returning SD applicants <br> New SD \& former ED applicants and financial aid requests <br> Turn in applications as early as possible! |
| :---: | :---: | :---: |
| PLACEMENT DECISIONS | Thurs., March 31 | ATDP mails notification of acceptance |
| TUITION DEADLINE | Mon., May 2 | Students return Notification of Attendance or Withdrawal Postmark deadline for tuition payment |
| REFUND DEADLINE | Wed., May 18 | Last day to request a full refund |
| MATH TESTING | Sat., May 21 | Placement \& diagnostic testing for students in most math courses |
| WELCOME \& ORIENTATION | Sun., June 5 | Orientation for students and parents <br> Textbooks and course readers available for purchase |
| CLASSES | Mon., June 20 | Secondary Division classes begin at UC Berkeley |
|  | Mon., July 4 | Holiday <br> Monday classes will hold a make-up session (to be determined) |
|  | Fri., July 29 | Classes End <br> Last day to complete payment for those paying in installments |

# Application Information Form <br> 2016 SUMMER SESSION - SECONDARY DIVISION 

Note: Please review the application instructions on pp. 16-20 before completing this form. In order to have a complete application, you must submit all required application documents indicated in these instructions.

University of California, Berkeley Academic Talent Development Program Graduate School of Education 70 University Hall \#1160 Berkeley, CA 94720-1160
http://atdp.berkeley.edu atdpoffice@berkeley.edu 510-642-8308

## I. Basic Information



| GRADE | NAME OF CURRENT SCHOOL | SCHOOL ADDRESS |
| :--- | :--- | :--- |

## Have you attended ATDP before?

No, but I have applied previously$\square$ Yes, I have attended the Secondary Division
$\square$ Yes, I have attended only the Elementary Division
LAST YEAR APPLIED

List any siblings also applying to ATDP
NAME(S) OF SIBLING(S)

Which division(s) are they applying for? $\square$ SD (Secondary) $\square$ ED (Elementary) Both

If this is your first time at ATDP, how did you hear about
Word of mouth
Internet
School-aged peer
Adult peer
Family member
School
Teacher
Counselor/Admin. Bulletin, flyer, etc.
$\square$ Search
Social media
Online advertisement
$\square$ Newspaper
Please specify:
$\square$ Other

## II. Course Selection

List one or more course choices below, in order of preference. If your primary choice (1) is full or your application is not competitive for it, we will consider your alternates (2-4) in order to schedule you.

Each selection you list represents a committed interest in enrolling in that course; do not list alternates if you would prefer not to attend rather than take an alternate course.

|  | COURSE THTLE |
| :---: | :--- |
| $\mathbf{1}$ |  |
| Pimary |  |
| $\mathbf{2}$ |  |
| Att. |  |
| $\mathbf{3}$ |  |
| Att. |  |
| $\mathbf{4}$ |  |
| Att. |  |


**You may have a better chance of placement into
your preferred course by selecting this option.

## TWO CONCURRENT COURSES - RESTRICTIONS APPLY

$\square$ I am petitioning to take two courses AND I have explained my request in my Letter of Interest (Application Item 1).

Recommended for returning students only. See page 3 for information and restrictions on petitioning to take two courses.

Research participation. ATDP has a responsibility to conduct research that contributes new knowledge that leads to growth and improvement in our understanding of how academically talented students learn and how they can be better served. We ask our students and their families to assist in this effort by contributing between 1 and 3 hours per year to participating in this research. However, opting not to participate in research will in no way affect admission into the program. Before a student can participate in a study, ATDP gives detailed information about it to the student and his or her parent(s) and obtains their informed consent in writing. IX of the Education Amendments of 1972, Section 504 of the Rehabilitation Act of 1973, and the Age Discrimination Act of 1975, does not discriminate on the basis of race, color, national origin, sex, handicap, or age in any of its policies, procedures, or practices; nor does the University discriminate on the basis of sexual orientation. This nondiscrimination policy covers admission and access to, and treatment and employment in, University programs and activities, including but not limited to, academic admissions, financial aid, educational services, and student employment. families first by email, then by phone, then by post mail if necessary. ATDP collects student email addresses for the sole purposes of (1) notifying parents and students of their application status, of (1) notifying parents and students of their application status,
(2) sending program news and announcements, (3) providing them (2) sending program news and announcements, (3) providing them
to instructors to facilitate communications regarding coursework during the summer program, (4) requesting feedback about the student's experiences involving the program, and (5) informing students of research participation opportunities. Students are not required to provide an email address; ATDP will instead use the parent's emai address for messages intended for the student.

## III. Biographical Data

In order to help us develop a greater base of knowledge about our student population, please complete the questions below. Your responses in this section will not affect your admission status or course placement.

1

| Please indicate your ethnic background by checking ALL that apply. |  |  |
| :--- | :--- | :--- |
| $\square$ American Indian/Alaskan Native II | $\square$ Pilipino/Filipino-American P | $\square$ Japanese/Japanese-American J J |
| $\square$ Latino/Other Hispanic-American S | $\square$ Chinese/Chinese-American A | $\square$ Korean/Korean-American $\mathbb{K}$ |
| $\square$ African-American/Black B | $\square$ Vietnamese/Thai/Other Asian V | $\square$ Other (please indicate): 0 |
| $\square$ Pacific Islander U | $\square$ East Indian/Pakistani E | $\square$ Decline to state D |
| $\square$ Mexican/Mexican-American/Chicano C | $\square$ White/Caucasian (\& Middle Eastern) W |  |

2 Which language(s) did you speak first?
English English and another language (specify): $\qquad$ Another language (specify):

3 In what country were you born?
$\square$ USA In another country (specify): , and I came to the USA in the year $\qquad$
4 Please indicate the highest level of education completed by each parent by writing the corresponding letter in each space.
A. Elementary school
F. Associate or two-year degree
G. Bachelor's or four-year degree
B. Some high school
H. Some graduate or professional school
C. High school diploma or equivalent
D. Business or trade school
E. Some college
I. Graduate or professional degree
$\left.\begin{array}{rl}\text { Completed by mother } \\ \text { (or parent/guardian 1) }\end{array}\right) \square$

OCCUPATION OF FATHER (OR PARENT/GUARDIAN 2)

6 Please indicate the approximate income of your parents last year.
Less than \$10,000 A

- \$25,000-\$50,000 C
- \$75,000-\$100,000 E
- \$150,000-\$200,000 G
[10,000-\$25,000 B
\$50,000 - \$75,000 D
[ \$100,000-\$150,000 F
- Over \$200,000 H


## IV. Financial Aid

Are you applying for need-based financial aid? $\square$ No Yes, and I have included my family's most recent Federal Tax Return and all Schedules (i.e., the complete tax return).

## V. Statement of Commitment

## All students and parents must agree to and sign the following statement of commitment prior to admission into ATDP.

"I understand that students may be dismissed from the Program without refund because of absences, failure to complete assignments, or behavior involving academic dishonesty or interpersonal interactions that is unfitting to the purpose of the Program."

Signature of Student Applicant
(Student MUST sign)

Signature of Parent or Guardian
(Parent MUST sign)

## Berkeley

 Remember: your application is NOT COMPLETE without all required items! See list and instructions on pp. 16-20.Returning Student postmark deadline: Wednesday, Feb. 17, 2016 New Applicant and Financial Aid deadline: Wednesday, Mar. 2, 2016

## Teacher Recomimendation Forin

2016 SUMMER SESSION - SECONDARY DIVISION (GRADES 7-11)

Dear Teacher,
You are receiving this form because your student is applying to the Academic Talent Development Program (ATDP), a UC Berkeley summer program which offers challenging classes for highly motivated students. In order to apply, each student must submit a recommendation form from a current teacher in an academic subject (such as mathematics, science, language arts; not fine arts, advisory, or extracurricular classes). Visit atdp.berkeley.edu for more information about the program.

Please:
(1) Complete the basic information below and both parts on the second page of this form.
(2) Seal the form in an envelope* and sign your name across the seal on the envelope's flap.
(3) Return the sealed envelope to the student.**

For your reference, the Secondary Division (SD) application postmark deadlines are Wednesday, February 17 for returning students and Wednesday, March 2 for new students. Late applications are accepted on a space-available basis.

Make any inquiries at atdpoffice@berkeley.edu or 510-642-8308. Your insights and recommendations are carefully considered. Thank you very much for your assistance and consideration.

## Student and Teacher Information (to be completed by recommending teacher)

| STUDENT'S FULL NAME |  |
| :--- | :--- |
| STUDENT'S SCHOOL |  |
| GRADE LEVEL(S) YOU <br> TEACH | ACADEMIC COURSE IN WHICH YOU TEACH THIS STUDENT |
| YOUR NAME |  |
| YOUR SIGNATURE |  |
| YOUR EMAIL (PLEASE PRINT CLEARLY) |  |

```
Has this student been selected for the Gifted \& Talented Education (GATE) program?
This question is for research purposes only. It is not used for selection at ATDP.
```

```
Yes
```

```
\(\square\) No GATE program at this school
\(\square\) I don't know
```

If you are this student's current math teacher, please indicate the student's current performance in math.

| Current math | Current math course (check one) |  |
| :--- | :--- | :--- |
| letter grade | $\square 6^{\text {th }}$ grade math | $\square$ Algebra II/Trigonometry |
| $\square$ | $\square 7^{\text {th }}$ grade math | $\square$ Precalculus/Math Analysis |
| $\square$ | $\square 8^{\text {th }}$ grade math | $\square$ Calculus |
| $\square$ Algebra I | $\square$ Other (please indicate): |  |

```
\square \text { Geometry}
```

[^1]
## Part I: Behavior Inventory

Please rate the student on the following nine behaviors associated with academic talent and creativity. Check "NA" if there has not been an opportunity to observe this behavior; check "Rarely" if you have observed this behavior once or twice; check "Sometimes" if you have observed this behavior more than once or twice but not regularly; and check "Frequently" if you have observed this behavior regularly.

1. $\quad$ becomes absorbed in intellectual activities and resists distraction
2. possesses extensive knowledge about a specific area of interest
3. shows ingenuity in using everyday materials or makes up games and activities
4. $\quad$ is able to transform material from one mode of expression (e.g., written, oral)
into another mode of expression (e.g., pictorial, musical, dramatic)
5. $\quad$ asks insightful and unusual questions that show a grasp of the concept underlying
the issue or situation at hand
6. $\quad$ works on a task or problem until it is completed
7. $\quad$ takes on challenging tasks that are complex and difficult
8. $\quad$ generates many unique ideas or solutions to questions and problems
9. 

adopts a systematic strategy for solving problems and can change the
strategy if it is not working

## Part II: Comments

Please provide examples or additional information about the student's academic or creative abilities.
You may attach a separate letter, if preferred.


[^0]:    *This is an accelerated math course with additional restrictions. Read its course description carefully. To apply, follow the instructions on page 9.
    **Public Speaking has sections divided by grade level. Section SD3650.1 \& 50.2 meet on MTh and are open to students completing grades 6,7 , or 8 only. Section SD3650.4 meets on TuF PM and is open to students completing grades 9,10 , or 11 only.
    ${ }^{\dagger}$ These 5 -unit courses have a compressed four-week schedule instead of the standard six-week Secondary Division schedule. They meet from June 20 through July 15.
    ${ }^{\ddagger}$ AP Biology is an all-day course, with sessions starting at 8:30 AM and ending at 4:30 PM.

[^1]:    * The student has been instructed to provide an envelope. Any envelope is acceptable.
    ** If you or your school has a policy of sending all recommendations directly, you may do so using the

