

IB Magnet Course of Study at Richard Montgomery High School

THE FRESHMAN YEAR: All 9th grade magnet students are enrolled in a preparatory "Pre-IB" program including: English 9; French, Spanish, or Chinese levels 2 or 3; Government; Biology; and Geometry, Analysis and Applications of Functions (AAF), or IB Pre-Calculus. **The accelerated speed of these courses allows time for in-depth analysis and sophisticated content more commonly associated with grade 11 and grade 12 high school honors and advanced placement courses.** Non-magnet courses with similar titles at Richard Montgomery do not offer the same content. The magnet Government course prepares students for the AP U.S. Government exam.

THE SOPHOMORE YEAR: All 10th grade magnet students continue the "Pre-IB" preparatory program including: English 10; French, Spanish, or Chinese levels 3 or 4; AP U.S. History; Chemistry; and AAF, IB Pre-Calculus, IB Math Studies (IB Pre-Calculus at a slightly reduced pace), AP Calculus AB, or AP Calculus BC. Prerequisites for IB electives begin in 10th grade. Art and Culture serves as a prerequisite for the demanding two-year sequence of IB Art and Design. AP Music Theory serves as a pre-requisite for IB Advanced Music.

THE JUNIOR YEAR: In 11th grade students begin preparing for their six IB exams, two of which may be taken in their junior year. Students must show strengths in college-level exams in five required disciplines (English, Foreign Language, Math, History, and Science) and one elective discipline (a second foreign language, a second science, Economics, Psychology, Theatre, Music, Computer Programming, or Art). **Unlike signature and magnet programs that allow specialization in one or two disciplines, IB expects students to demonstrate cross-curricular strength, which creates an intensely rigorous program for all students.** All students must complete at least level 5 of French, Spanish, or Chinese to be able to test in foreign language. All students must complete at least one Calculus course to be able to test in math. (The highest level formal math class is Multivariable Calculus and Differential Equations, but an independent course of studies is available for students who complete Multivariable Calculus before their senior year.) Two or three IB exams must be taken at the Standard Level; three or four IB exams must be taken at the Higher Level in the senior year.

THE SENIOR YEAR: **In the senior year full IB diploma candidates have demonstrated commendable motivation, determination, and academic achievement.** All students complete work on their extended essays, their Theory of Knowledge and CAS requirements. Students prepare for their IB exams by completing required coursework in IB English (a two-year study which includes international literature) and IB History (a two-year study which focuses on European and Russian History). Students complete Higher Level coursework in one or two additional disciplines and complete coursework leading to additional Standard Level exams. Higher Level offerings include English, History, Foreign Language, Biology, Physics, Mathematics, Visual Arts, Computer Science, Film Studies, Music, and Theatre. Standard Level offerings include Foreign Language, Psychology, Economics, Chemistry, Physics, Environmental Systems, Mathematics, Math Studies, Music, Film Studies, Sociology, Philosophy and Theatre. Students who plan to test in Higher Level Mathematics must complete Multivariable Calculus and Differential Equations.

In addition, by fall of their senior year, all IB diploma candidates must complete an extended research essay of 3500–4000 words on a topic of their choice in one of the subjects of the IB curriculum. Also, all students must complete two years of Theory of Knowledge. This interdisciplinary course leads students to reflect on the bases of knowledge and experience, increase awareness of subjective and ideological biases, develop a personal mode of thought based on critical examination of evidence and argument, and formulate rational arguments. Finally, by spring of their senior year, all students must participate and reflect on approximately 150 hours of Creativity, Action, and Service (CAS) experiential activities.

EXPECTATIONS AND STUDENT SUCCESS FOR THE IB CLASS OF 2012

As a result of the selection process, classroom expectations and exam performance are substantially higher than that of comparable programs worldwide. For the May 2011 testing season, IB scores at Richard Montgomery exceeded worldwide averages in 22 subjects. Five subjects exceeded worldwide averages by a full point.

Individual performance records, e.g. high school transcripts, should be considered in light of the extraordinary nature of the program and its students, who continue as academic standouts in college. IB students also take advantage of the many AP classes offered at the high school and sit for both AP and IB examinations. RMHS offers a preparatory program in 9th and 10th grades, as well as the IB Diploma Program in 11th and 12th grades. IB Magnet students make up approximately 23% of the school population. Richard Montgomery Pre-IB and IB courses are advanced level classes and are designated "ADV."

- For more than a decade, Richard Montgomery High School's IB Diploma Program has ranked among the most successful in the world.

94% of Richard Montgomery's IB candidates in 2011 earned the IB Diploma;

25 students earned Bi-Lingual Diplomas.

(The average worldwide success rate is approximately 79 %.)

- Student performance on the IB exams reflects the high classroom expectations.

222 IB Exams Taken in the Junior Year by the Class of 2012

Score Summary: 7 = 10% 6 = 42% 5 = 31% 4 = 14% Below 4 = 3%

- Student performance on the Advanced Placement exams reflects the high classroom expectations.

810 Advanced Placement Exams Taken Before the Senior Year by IB Students in the Class of 2012

Score Summary: 5 = 52% 4 = 30% 3 = 15% Below 3 = 3%

- SAT Mean Scores for IB Students in the Class of 2012: 2130

Verbal/Critical Reading: 730 Math: 700 Writing: 690

- National Merit Scholarship Program Semifinalists:

36 IB Diploma Candidates, Class of 2012, are Merit Scholarship Semifinalists

41 IB Diploma Candidates, Class of 2012, are Merit Scholarship Commended Students

- 2010 Gates Millennium Scholar
- 2010 Intel Science Talent Search Semi-Finalist
- Junior Achievement Scholarship Competition

2010 - 2 Semifinalists 2009 - First Place Winner

- 2009 & 2008 Siemens Competition, Math: Science: Technology Regional Finalists