

Illinois Mathematics and Science Academy®

*igniting and nurturing creative, ethical scientific minds
that advance the human condition*

Founding member of the National Consortium for Specialized Secondary Schools of Mathematics, Science and Technology
Accredited by the North Central Association of Secondary Schools

The internationally recognized Illinois Mathematics and Science Academy® (IMSA) develops creative, ethical leaders in science, technology, engineering and mathematics. As a teaching and learning laboratory created by the State of Illinois, IMSA enrolls academically talented Illinois students (grades 10-12) in its advanced, residential college preparatory program and it serves thousands of educators and students in Illinois and beyond through innovative instructional programs that foster imagination and inquiry. IMSA also advances education through research, groundbreaking ventures and strategic partnerships. (www.imsa.edu)

IMSA employs 56 teaching faculty members, all of whom have advanced degrees, with 54% holding doctorate degrees. In addition, 27% of faculty members are certified by the National Board for Professional Teaching Standards (NBPTS).

IMSA fosters a collaborative learning environment that is problem centered, inquiry based and integrative. IMSA's students are engaged in rich opportunities to work with prominent researchers, explore questions of their own, champion their ideas for product development and make significant leadership contributions.

Student Inquiry and Research (SIR) - is an interactive partnership that pairs students with on-campus and off-campus professionals so that they can actively investigate a topic about which they are passionate. The SIR standards focus on planning, investigating, analyzing, and communicating. Requirements include a proposal, investigation journal, active engagement, progress report, draft and final papers, presentation at IMSAloquium, and final summaries and evaluation.

Total Applied Learning for Entrepreneurs (TALENT) - provides students with experiential learning opportunities in all matters related to bringing an idea to the marketplace to solve real world problems. TALENT aims to instill the thinking patterns and mindset of an entrepreneur and to engage students in activities that include, but are not limited to, understanding intellectual property, developing a business plan, developing products, securing funding, networking, communicating ideas, and starting a business.

Independent Study - is a student-selected learning experience that goes beyond the IMSA course offerings. An Independent Study may only be conducted by a senior under the direction of an IMSA faculty member for one or two semesters.

Leadership Education - IMSA provides opportunities for students to enhance their leadership skills. Sophomores are required to attend Navigation (small group discussions covering transitional issues and guest lecturers) and a student facilitated leadership program designed to develop servant leadership. Juniors are required to attend Synergy Seminars with an emphasis on the process of ethical decision making. Synergy aims to equip students with the ability to thoughtfully reflect on the world around them and in turn make responsible decisions as future leaders.

Service Learning - Students are required to complete 100 hours of community service and approximately 220 hours of campus work service during their three years at IMSA.

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In light of IMSA's selective admission process and in order to promote collaborative exploration and discovery, the Academy does not provide grade point averages or class rankings.

College and Academic Counseling Office
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www.imsa.edu/learning/cac/ | CEEB Code: 140177

2009 PROFILE

Total graduation requirement: 16 credits. Eight (8) credits must be in mathematics and science.
For information on course descriptions, please visit our Web site www.imsa.edu/learning/cac/academics/

Science 4.0 credits minimum	Core Courses Methods in Scientific Inquiry Scientific Inquiries: Biology Scientific Inquiries: Chemistry Scientific Inquiries: Physics	Biology Electives Evolution, Biodiversity, and Ecology Microbes and Disease Molecular and Cellular Biology Physiology and Disease Seminar in Biology: Neurobiology	Chemistry Electives Advanced Chemistry: Matters and Molecules Advanced Chemistry: Reactions and Quantitative Analysis Biochemistry Organic Chemistry I Organic Chemistry II	Physics Electives Applied Engineering Electronics Modern Physics Physics: Applied Mechanics Physics: Light and Sound Physics: Calculus-based Mechanics Physics: Calculus Based Electricity and Magnetism Planetary Science		
Mathematics 3.0 credits minimum	Core Courses AB Calculus I AB Calculus II BC Calculus I BC Calculus II BC Calculus III Geometry I/II Mathematical Investigations I/II Mathematical Investigations II Mathematical Investigations III Mathematical Investigations IV	Computer Science Electives Advanced Programming: Computer Science Computer Science in Emerging Technology Computer Seminar Object Oriented Programming	Math Electives Advanced Geometry Advanced Topics in Mathematics Data Analysis Differential Equations Discrete Mathematics Introduction to Algebraic Structures I Introduction to Algebraic Structures II Mathematica and Mathematics Multi-Variable Calculus Number Theory Problem Solving Theory of Analysis			
English 3.0 credits minimum	Core Courses Literary Explorations I (sophomore) Literary Explorations II (junior)	Senior Electives Belief in Question in Modern Literature Film Study: History and Criticism Gender Studies IMSATube: Non-Fiction Film Study Modern Irish Literature Portraits of Creativity The Idea of the Individual Topics in World Literature: Modern World Fiction Topics in World Literature: Victorian Fiction				
Social Science 2.5 credits minimum	Core Courses American Studies (sophomore) Topics in World Studies (junior)	Senior Electives European History History of Technology and Culture History of Astronomy International Relations Macroeconomics Microeconomics Political Theory Topics in Recent US History World War II & the Cold War, 1937-1991				
A student must complete two years of study with one year at the level II or higher						
World Languages 2.0 credits minimum	Chinese I Chinese II	French I French II French III French IV French V	German I German II German III German IV German V	Japanese I Japanese II Japanese III	Russian I Russian II Russian III	Spanish II Spanish III Spanish IV Spanish V Explorations in Linguistics
Fine Arts 0.5 credit minimum	Music Chamber Choir Chamber Strings Concert Band Concert Choir String Orchestra Wind Ensemble	Visual Arts Advanced Ceramics Art Design Ceramics Photography				
Wellness Education Core Course + 1 Elective Pass/Fail only	Core Course Moving and Learning	Electives Basketball and Soccer Beginning and Intermediate Swimming Bowling and Fencing Dance: Ballroom and Multicultural Individual Physical Fitness Lifeguarding and Water Polo Outdoor and Indoor Games Tennis and Badminton				
Independent Learning No credit given; Pass/Fail or Pass with Distinction	Independent Study Student Inquiry and Research (SIR) Total Applied Learning for Entrepreneurs (TALENT)					

IMSA Testing Highlights

ACT Scores - Class of 2008 - Middle 50% Ranges/Means

	IMSA Mean (N = 175)	IMSA Middle 50% Range	Illinois College-Bound Senior Mean	All College-Bound Senior Mean
Composite	30.3	28.0 - 33.0	20.7	21.1

SAT I Reasoning Test - Class of 2008 - Middle 50% Ranges/Means

	IMSA Mean (N = 198)	IMSA Middle 50% Range	Illinois College-Bound Senior Mean	All College-Bound Senior Mean
Critical Reading	653	590-720	583	502
Math	704	660-760	601	515
Writing	644	570-710	578	494

SAT II Subject Tests - Class of 2008 - Means

	IMSA Scores Reported	IMSA Mean	Illinois College Mean	All College Mean
English Literature	39	670	649	580
Mathematics Level II C	115	748	709	644
Science Biology E Biology M Chemistry Physics	19 22 56 30	709 701 704 698	651 673 664 683	593 630 635 650

Scholarship Recognition

Class of 2009

- 205 Total number of students in class
- 4 National Achievement Semifinalists
 - 50 National Merit Semifinalists
 - 54 National Merit Letters of Commendation

Class of 2008

- 205 Total number of students in class
- 2 National Achievement Finalists
 - 42 National Merit Finalists
 - 49 National Merit Letters of Commendation
 - 1 National AP Scholar
 - 5 National AP Scholars with Distinction
 - 9 National AP Scholars with Honors
 - 4 Intel Science Talent Search Semi-finalists
 - 5 Siemens Westinghouse Competition Semi-finalists
 - 1 National Winner of the Academic, Cultural, Technological and Scientific Olympics (ACT-SO)
 - 12 American Invitational Mathematics Examination Qualifiers
 - 1 Gold Medalist in the 2008 China Girls Mathematical Olympiad
 - 1 U.S. Physics Competition Semi-finalist
 - 1 Illinois Junior Academy of Science Winner
 - 1 National Outstanding Paper group award in the International Mathematics Modeling Contest
 - 1 Governor's 2008 Green Youth Award Group Recipient
 - 1 First Place Winner (math team) in the Illinois Council of Mathematics State Contest

Advanced Placement (AP) Examinations for 2007—2008 School Year

Although IMSA does not offer AP courses, 86% of students who tested last year scored 3 or higher on examinations. 618 AP examinations were administered to 292 students.

Examinations	Biology	Calculus AB	Calculus BC	Computer Science AB	Chemistry	English Language	English Literature	Physics C: Mech	Physics C: E & M
No of Students Tested	59	30	131	22	108	28	17	46	44
Average Score	3.52	3.36	4.48	3.90	3.43	3.96	4.00	4.13	4.02

Grade Distribution Report for Junior Course Enrollment

Course	A	A-	B+	B	B-	C+	C	C-	D	Pass	No of Students
Mathematical Investigations IV (spring 2008)	12	11	7	16	10	7	6	7	3	0	79
BC Calculus I (spring 2008)	5	18	15	17	7	7	5	1	2	0	77
BC Calculus II (spring 2008)	10	5	9	8	2	2	3	1	0	0	40
Advanced Chemistry - Matters and Molecules (fall 2007)	32	24	13	23	40	5	4	1	1	0	113
Advanced Chemistry - Reactions and Qualitative Analysis	26	29	14	18	14	7	6	3	0	0	117
Advanced Physics - Motion and Forces (fall 2007)	11	16	7	15	5	1	5	3	0	0	63
Advanced Physics - Waves and Fields	15	13	11	12	3	0	2	2	0	0	58
Molecular and Cellular Biology	5	0	1	36	0	0	6	0	1	0	49
Literary Explorations II (spring 2008)	13	73	50	39	20	11	3	1	1	0	211
Topics in World Studies (spring 2008)	39	69	38	33	9	11	4	0	6	0	209

Explanation of Grades

A	Exceeds course requirements	P	Meets course requirements, credit may/may not be awarded
B	Meets course requirements	P+	Pass with Distinction
C	Needs improvement	F	Does not meet course requirements, no credit awarded
D	Does not meet course requirements, no credit awarded	WF	Withdrawn from course with failing grade

IMSA Matriculations - Class of 2008 (205 Graduates)

Boston College - 1	Lake Forest College - 2	Sweet Briar College - 1
Boston University - 3	Lawrence University - 2	Texas Christian University - 1
Bradley University - 1	Lehigh University - 1	The George Washington University - 1
Brown University - 1	Loyola University - Chicago - 1	The John Hopkins University - 1
California Institute of Technology - 3	Macalester College 1	Truman State University - 1
Case Western Reserve University - 4	Massachusetts Institute of Technology - 6	Tufts University - 1
Claremont McKenna College - 3	Miami University - 2	Tulane University - 2
Clemson University - 1	Michigan State University - 1	United States Coast Guard Academy - 1
Cornell University - 1	Michigan Technological University - 1	University of Chicago - 12
Dartmouth College - 2	Monmouth College - 1	University of Evansville - 1
Davidson College - 1	Morehouse College - 1	University of Georgia - 1
DePaul University - 1	New York University - 1	University of Illinois at Chicago - 11
Dickinson College - 1	Northern Illinois University - 1	University of Illinois at Urbana-Champaign - 35
Drexel University - 1	Northwestern University - 8	University of Iowa - 1
Duke University - 4	Oberlin College - 1	University of Miami - 1
Earlham College - 1	Oglethorpe University - 1	University of Missouri - Columbia - 4
Eckerd College - 1	Rensselaer Polytechnic Institute - 1	University of Missouri - Kansas City - 1
Emory University - 1	Rhode Island School of Design - 1	University of Missouri: Rolla - 1
Florida Institute of Technology - 1	Rochester Institute of Technology - 1	University of Nebraska - Lincoln - 1
Georgia Institute of Technology - 1	Rose-Hulman Institute of Technology - 3	University of Notre Dame - 4
Grinnell College - 1	Rutgers, The State University of NJ - 1	University of Saint Thomas - 1
Hampshire College - 1	Scripps College - 1	University of Southern California - 4
Harvard University - 1	Smith College - 1	University of Wisconsin - Madison - 3
Harvey Mudd College - 3	Southern Illinois University Edwardsville - 1	Valparaiso University - 1
Illinois Institute of Technology - 6	Southern Methodist University - 2	Villanova University - 1
Illinois State University - 1	Stanford University - 1	Washington University in St Louis - 3
Illinois Wesleyan University - 2	Stetson University - 1	Wellesley College - 1
Indiana Wesleyan University - 1	St John's University - 1	Wheaton College - 1
Iowa State University - 5	St Louis University - 3	Yale University - 1
Kalamazoo College - 1	St Olaf College - 2	
Knox College - 1		

Universities and Colleges With the Largest IMSA Graduate Enrollment Classes of 2006 - 2008

Boston University - 4	Illinois Institute of Technology - 13	St. Louis University - 7
California Institute of Technology - 10	Illinois Wesleyan University - 7	Stanford University - 7
Carnegie Mellon University - 7	Iowa State University - 8	University of Chicago - 29
Case Western Reserve University - 20	Knox College - 4	University of Illinois at Chicago - 31
Cornell University - 8	Massachusetts Institute of Technology - 15	University of Illinois at Urbana-Champaign - 139
Dartmouth College - 4	New York University - 4	University of Missouri Columbia - 4
Dickinson College - 4	Northwestern University - 28	University of Notre Dame - 5
Drexel University - 4	Oberlin College - 4	University of Pennsylvania - 4
Duke University - 18	Rice University - 4	University of Southern California - 8
Florida Institute of Technology - 4	Rose-Hulman Institute of Technology - 4	Washington University - 10
Harvard University - 5		Yale University - 4

College Placement Profile by %

	2008	2007	2006
4 Yr College	99.5	98.5	98.9
Private Schools	64.4	56.9	60.1
In-State	17.6	15.2	15.3
Out-of-State	46.8	41.7	44.3
Public Schools	35.6	43.1	39.3
In-State	23.4	36.8	31.1
Out-of-State	12.2	6.4	6.6

Student Population of Academy 2008-2009

Male = 49.7%	Female = 50.3%
White/Non-Hispanic	41.4%
Asian/Pacific Islander	38.4%
African American	6.9%
Hispanic/Latino	4.9%
Multi-racial	6.4%
Other	2.0%

