

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 Schools of Science, Mathematics 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. It also serves thousands of educators and students in Illinois and beyond through innovative instructional programs that foster imagination and inquiry.

IMSA employs 52 teaching faculty members, all of whom have advanced degrees, with 43% 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 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

2008 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 Advanced Physics: Motion and Forces Advanced Physics: Waves and Fields Applied Engineering Astrophysics Calculus Based Physics: Mechanics Calculus Based Physics: Electricity and Magnetism Electronics Modern Physics 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 Mathematical Investigations II Mathematical Investigations III Mathematical Investigations IV	Computer Science Electives Advanced Programming Computer Science Computer Science in Emerging Technology Computer Seminar Introduction to Computer Science	Math Electives Advanced Geometry Advanced Topics in Mathematics Data Analysis Differential Equations Discrete Mathematics Introduction to Algebraic Structures I: Linear Algebra Introduction to Algebraic Structures II: Abstract Algebra Mathematica and Mathematics Multivariable 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 Video Production 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 A History of Technology and Culture Cultural History of Astronomy European History International Relations Macroeconomics Microeconomics Political Theory Topics in Recent US History The Second World War and the Cold War																																													
A student must complete two years of study with one year at the level II or higher																																															
World Languages 2.0 credits minimum	<table border="0" style="width: 100%;"> <tr> <td style="width: 12.5%;">Chinese 1</td> <td style="width: 12.5%;">French I</td> <td style="width: 12.5%;">German I</td> <td style="width: 12.5%;">Japanese I</td> <td style="width: 12.5%;">Russian I</td> <td style="width: 12.5%;">Spanish II</td> <td style="width: 12.5%;"></td> <td style="width: 12.5%;">Explorations in Linguistics</td> </tr> <tr> <td></td> <td>French II</td> <td>German II</td> <td>Japanese II</td> <td>Russian II</td> <td>Spanish III</td> <td></td> <td></td> </tr> <tr> <td></td> <td>French III</td> <td>German III</td> <td>Japanese III</td> <td>Russian III</td> <td>Spanish IV</td> <td></td> <td></td> </tr> <tr> <td></td> <td>French IV</td> <td>German IV</td> <td></td> <td></td> <td>Spanish V</td> <td></td> <td></td> </tr> <tr> <td></td> <td>French V</td> <td>German V</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>							Chinese 1	French I	German I	Japanese I	Russian I	Spanish II		Explorations in Linguistics		French II	German II	Japanese II	Russian II	Spanish III				French III	German III	Japanese III	Russian III	Spanish IV				French IV	German IV			Spanish V				French V	German V					
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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 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 2007 - Middle 50% Ranges and Means

	IMSA Mean (N = 182)	IMSA Middle 50% Range	Illinois College-Bound Senior Mean	All College-Bound Senior Mean
Composite	30.3	28.0 - 33.0	20.5	21.2

SAT I Reasoning Test - Class of 2007 - Middle 50% Ranges and Means

	IMSA Mean (N = 210)	IMSA Middle 50% Range	Illinois College-Bound Senior Mean	All College-Bound Senior Mean
Critical Reading	658	600-710	594	502
Math	715	680-780	611	515
Writing	651	590-700	588	494

SAT II Subject Tests - Class of 2007 - Means

	IMSA Scores Reported	IMSA Mean	Illinois College Mean	All College Mean
English Literature	45	652	647	581
Mathematics Level II C	131	751	705	639
Science				
Biology E	16	663	638	589
Biology M	30	674	672	630
Chemistry	74	708	670	630
Physics	32	689	681	647

Scholarship Recognition

Class of 2008

210 Total number of students in class

- 4 National Achievement Semifinalists
- 43 National Merit Semifinalists
- 49 National Merit Letters of Commendation

Class of 2007

203 Total number of students in class

- 6 National Achievement Finalists
- 30 National Merit Finalists
- 60 National Merit Letters of Commendation
- 5 National AP Scholars with Distinction
- 10 National AP Scholars with Honors
- 1 Intel Science Talent Search Finalist
- 5 Intel Science Talent Search Semifinalists
- 4 Siemens Westinghouse Competition Semifinalists
- 1 Siemens Award for Advanced Placement Winner
- 1 National Winner of the 2007 American Academy of Neurology Neuroscience Research Prize
- 1 Davidson Fellows Scholarship Winner
- 28 American Invitational Mathematics Examination Qualifiers
- 2 U.S. Physics Competition Semifinalists
- 2 Illinois Junior Academy of Science Winners

Advanced Placement (AP) Examinations for 2007 School Year

Although IMSA does not offer AP courses, 82% of students who tested last year scored 3 or higher on examinations. 592 AP examinations were administered to 257 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	54	18	139	25	95	11	12	59	52
Average Score	3.55	3.61	4.56	3.44	3.70	4.45	4.08	3.88	3.57

Grade Distribution Report for Junior Course Enrollment 2006-2007

Course	A	A-	B+	B	B-	C+	C	C-	D	Pass	No of Students
Mathematical Investigations IV (spring 2006)	13	17	10	24	12	6	12	0	1	0	95
BC Calculus I (spring 2007)	2	11	7	17	19	8	9	1	0	0	74
BC Calculus II (spring 2007)	7	6	4	5	5	2	4	1	0	0	34
Advanced Chemistry - Matters and Molecules	21	20	13	15	15	15	8	3	1	0	111
Advanced Chemistry - Reactions and Qualitative Analysis	11	20	13	25	15	7	7	1	2	0	101
Advanced Physics - Motion and Forces	7	14	7	8	5	1	1	0	0	0	43
Advanced Physics - Waves and Fields	3	15	4	14	5	0	0	0	0	0	41
Molecular and Cellular Biology	18	1	6	29	3	3	12	2	0	1	75
Literary Explorations II (spring 2007)	42	74	35	13	35	3	3	3	4	0	212
Topics in World Studies (spring 2007)	43	69	32	18	40	0	1	7	2	0	212

Explanation of Grades

- A Exceeds course requirements
- B Meets course requirements
- C Needs improvement
- D Does not meet course requirements, no credit awarded
- WF Withdrawn from course with failing grade

Pass/Fail Options

- P Meets course requirements, credit may/may not be awarded
- F Does not meet course requirements, no credit awarded
- P+ Pass with Distinction

IMSA Matriculations - Class of 2007 (203 Graduates)

Albion College - 1	Hampshire College - 1	St. John's College - 1
Amherst College - 2	Harvard University - 1	St. Louis University - 4
Andrews University - 1	Hillsdale College - 1	St. Olaf College - 1
Beloit College - 1	Illinois Institute of Technology - 6	Suffolk University - 1
Boston University - 1	Illinois State University - 1	Texas Christian University - 1
California Institute of Technology - 4	Illinois Wesleyan University - 1	United States Air Force Academy - 1
Carnegie Mellon University - 4	Indiana University Bloomington - 1	United States Coast Guard Academy - 1
Case Western Reserve University - 8	Iowa State University - 2	United States Military Academy - 1
Colby College - 1	John Hopkins University - 1	University of Chicago - 10
Cornell College - 1	Kettering University - 1	University of Illinois at Chicago - 12
Cornell University - 3	Massachusetts Institute of Technology - 4	University of Illinois at Urbana-Champaign - 58
Dartmouth College - 1	Michigan State University - 1	University of Iowa - 1
DePauw University - 1	Mount Holyoke College - 1	University of Minnesota: Twin Cities - 1
Dickinson College - 1	New York University - 3	University of Missouri: Rolla - 1
Drexel University - 1	North Central College - 2	University of North Carolina at Chapel Hill - 1
Duke University - 8	Northern Illinois University - 1	University of Notre Dame - 1
Eastern Illinois University - 1	Northwestern University - 12	University of Pennsylvania - 2
Eckerd College - 1	Oberlin College - 2	University of Pittsburgh - 1
Emory University - 1	Princeton University - 3	University of Puget Sound - 1
George Washington University - 1	Purdue University - 1	University of Southern California - 3
Gettysburg College - 1	Rose-Hulman Institute of Technology - 1	Washington University in St Louis - 2
Grinnell College - 1	Smith College - 1	Yale University - 2
	Stanford University - 3	

Universities and Colleges with the Largest IMSA Graduate Enrollment Classes of 2005 - 2007

California Institute of Technology - 8	Iowa State University - 4	University of Chicago - 20
Carnegie Mellon University - 7	Massachusetts Inst of Technology - 11	University of Illinois at Chicago - 29
Case Western Reserve University - 27	McGill University - 4	University of Illinois at Urbana-Champaign - 173
Cornell University - 8	Northwestern University - 31	University of Pennsylvania - 6
Drexel University - 4	Oberlin College - 4	University of Pittsburgh - 4
Duke University - 16	Princeton University - 4	University of Southern California - 7
Harvard University - 7	Rice University - 4	Washington University - 13
Illinois Institute of Technology - 11	St. Louis University - 8	Yale University - 3
Illinois Wesleyan University - 6	Stanford University - 9	

College Placement Profile by %			
	2007	2006	2005
4 Yr College	98.5	98.9	99.5
Private Schools	56.9	60.1	52.6
In-State	15.2	15.3	11.6
Out-of-State	41.7	44.3	39.6
Public Schools	43.1	39.3	47.3
In-State	36.8	31.1	39.1
Out-of-State	6.4	6.6	8.2
Others	1.4	2.2	1.4

Student Population of Academy 2006-2007	
Male = 50%	Female = 50%
White	37%
Asian American	41%
African American	8%
Hispanic/Latin	7%
Multi-racial	6%
Not Reported	1%

