quick facts

illinois mathematics and science academy®

established by the state of illinois to develop talent and leadership in science, technology, engineering and mathematics (stem), the illinois mathematics and science academy® (imsa) has become an internationally recognized, world-class powerhouse for inspiring, challenging and nurturing talented students who will use their exceptional abilities to improve people’s lives. imsa’s advanced residential college preparatory program enables academically talented illinois students in grades 10 through 12 to reach extraordinary levels of achievement. the academy’s students are widely recognized by organizations such as the college board advancement placement program, the wall street journal and newsweek. imsa’s innovative student inquiry and research programs have enabled students to earn numerous awards from national and global competitions including intel science talent search, the siemens competition in math, science and technology, the international physics olympiad, the high school mathematical contest in modeling and the china girls mathematical olympiad.

as a resource for the people of illinois, the academy serves thousands of teachers and students throughout illinois and across the country. imsa’s award-winning statewide programs include teacher professional development in research-based and practice-proven instruction in mathematics, science and technology. the academy’s statewide programs ensure that young students, particularly the underserved, have opportunities to excel in mathematics and science.

the academy also works with educational, business, government and entrepreneurial partners to develop, test and share innovative ways to enhance teaching and learning in science, technology, engineering and mathematics.

imsa wins top national intel star innovator award for science excellence

the illinois mathematics and science academy (imsa) has been named the nationwide winner of the intel star innovator award. this award is presented annually to one educational institution that has a “comprehensive program incorporating innovative and effective use of technology, engaging parents and the community in students’ education, fostering professional development and teamwork, and delivering consistent achievement of high academic standards.”

from an applicant pool of more than 700 schools, imsa was named one of the six 2009 intel schools of distinction award recipients. from these six, intel selected imsa to receive the top honor as star innovator during an awards reception in washington, d.c.
History and Governance

IMSA was established in 1985 by the Illinois General Assembly as part of the State’s comprehensive educational reform package to address the critical need for citizens highly skilled in STEM fields. The Academy opened in 1986. IMSA is governed by an appointed Board of Trustees and is funded by the Illinois legislature under the Illinois Board of Higher Education appropriation.

Funding

IMSA’s operating budget is funded largely by the State of Illinois, which supports most on-campus and some statewide programs and services. Co-curricular activities for resident students and most of IMSA’s non-resident programs are supported by fee income from program participants. IMSA also secures supplemental local, state and federal government grants for programs, as well as private donations and grants through the IMSA Fund for Advancement of Education (IMSA Fund). Examples of recent major donors to the IMSA Fund include Abbott Fund, Helen Thom Edwards Charitable Trust, Lloyd A. Fry Foundation, Paul Galvin Memorial Foundation Trust, Motorola Foundation, Polk Bros. Foundation and Tellabs Foundation. The growing endowment will eventually provide annual support for innovation, as approved by the IMSA Fund Board, and for specific projects of interest to donors and IMSA. In support of its total operating budget, IMSA receives about $1 in fees, grants, gifts and contracts for every $3 of state funding. IMSA’s FY10 operating budget is $23,498,900.

Residential College Preparatory Program

*Named among the top public college preparatory programs in the nation by* Newsweek *magazine and The Wall Street Journal rankings.*

IMSA’s mission is to ignite and nurture creative, ethical scientific minds that advance the human condition. The academic program does so by providing teaching and learning experiences that focus on imagination, inquiry, problem-solving and integration.

IMSA offers more than 100 advanced learning experiences in mathematics, science, the arts and humanities, with an emphasis on meaningful connections and integration. Personalized learning helps students chart a learning program that matches their interests, skill sets, and career goals by celebrating strengths, accommodating unique needs, accelerating learning opportunities when appropriate, and engaging students in a self-reflective learning process.

The innovative Student Inquiry and Research (SIR) program enables students to pursue compelling questions of interest, conduct and present findings of original research, engage in entrepreneurial applied science and technology activities, and collaborate with other students, mentors, scholars, researchers and inventors throughout the world.

Multiple assessment tools provide evidence of deep understanding of knowledge within and across disciplines. Assessments also measure a student’s increased levels of expertise through performance and complex problem solving. To promote collaboration, IMSA does not calculate grade point averages or class rankings.

*Admission and Student Demographics*

IMSA is tuition free. An annual student fee is assessed based on family size and income.
Illinois students enrolled in the equivalent of a 9th-grade program are eligible to apply. Admission is competitive. Selection criteria include demonstrated interest and talent in mathematics and science, grades, teacher evaluations, a current SAT Reasoning test score, personal essays and involvement in leadership and co-curricular activities.

IMSA’s 650 students are from urban, suburban and rural communities throughout Illinois.

Male – 51.5%; Female – 48.5%; White/Non-Hispanic - 40.5%; Asian/Pacific Islander – 40.8%; African American – 8.3%; Hispanic/Latino – 5.3%; Other - 5.0%.

The Mean SAT I scores for IMSA’s Class of 2009 include the following: 666 for critical reading (165 points above the national average for college-bound seniors); 721 for math (206 points above the national average) and 663 for writing (170 points above the national average). The Mean ACT composite score for IMSA’s Class of 2009 was 31.5, 10.4 points above the national average for college-bound seniors.

**Multicultural Development**

IMSA is committed to serving historically underrepresented and underserved students who have talent and interest in mathematics and science. To accomplish this goal, we actively recruit prospective students from all regions of Illinois. In addition, we provide several academic, enrichment programs for students in grades 4-9 such as IMSA Excellence 2000+ (E2K+), and PROMISE which includes Project School Visit, Summer Enrichment for Academics in Mathematics and the Early Involvement Program.

**Programs Serving Educators and Students Throughout Illinois and Beyond**

In the past decade, IMSA has enrolled more than 52,000 registrants in its student programs and 14,000 registrants in its educator programs. Learn more at www.imsa.edu/programs.

**IMSA Excellence 2000+ (E2K+) -** Offers an after-school enrichment program throughout Illinois for late elementary (grades 4-5) and middle school students (grades 6-8) who are talented, interested and motivated in mathematics and science, with a special emphasis on students who are historically underrepresented and underserved in these content areas. IMSA curriculum and professional development specialists provide training and support to participating teachers. In 2008-09, 67 schools participated in the program, reaching nearly 1,500 students statewide. Schools must apply to participate in the program.

**IMSA Kids Institute® (K.I.) -** Offers various programs of hands-on enrichment activities for students in grades 3-10 on the IMSA campus and throughout Illinois, integrating concepts of science, mathematics and technology with the humanities. K.I.’s programs and products impacted more than 6,500 students during 2008-09. The programs are designed and delivered by IMSA students and staff.

**Problem-Based Learning Network -** Offers instruction and follow-up support for teachers in using problem-based learning (PBL) to improve student achievement. The PBL network serves teachers through professional development in summer institutes, conference presentations, classroom mentoring, seminars, and an online network of colleagues and PBL experts. The program also provides Summer Sleuths or Investigaciones (for bilingual-Spanish students), a summer PBL experience for students in grades 6-9.

**Teacher Candidate Institutes (TCIs) –** Offered in collaboration with a university partner, TCIs are two-week programs that enable preservice education candidates to encounter a wide range of instructional activities from planning and design to implementing lessons and assessing student learning in a mentored environment. TCIs focus on science, technology, engineering and
mathematics (STEM) content and are meant to increase the comfort level and facility of teacher candidates in these critical areas.

**Expansion of Programs and Services** - To help expand its programs and services for Illinois teachers and students, the Academy opened two IMSA Field Offices in 2009 (Chicago and the Metro East Area). These will extend IMSA’s current professional development programs for teachers and enrichment programs for students. The Field Offices also will serve as central hubs for math and science resources by coordinating with local organizations that provide community-based math and science enrichment programs.

IMSA Chicago Field Office
James R. Doolittle East School
535 East 35th Street, Room 101
Chicago, IL 60616
Contact: Keshia Osley, Chicago Field Office Coordinator
Phone: 630.723.8096, E-mail: Chicagooffice@imsa.edu

IMSA Metro East Field Office
Lindenwood University
2600 W. Main Street, Room 217
Belleville, IL 62226
Contact: Cindy Lyles, Metro East Field Office Coordinator
Phone: 618.791.3855, E-mail metroeastoffice@imsa.edu

**Research, Evaluation and Scholarship**

IMSA is the key pilot site for developing the instruments for a large-scale, national research study by the American Psychological Association of the impact of specialized public high schools of science, mathematics and technology. IMSA’s longitudinal cohort study and student data models are a backbone for the study which involves 30 schools and 6,000 students, and IMSA staff members serve on several project advisory panels.

In addition to the APA study, IMSA faculty and staff are engaged in a number of joint research, evaluation and scholarship projects with a number of external partners including the University of Illinois at Urbana-Champaign, Aurora University, and the University of Georgia. Some of the projects include female enrollment in physics courses, evaluation of advanced chemistry curriculum, development of several masters programs in mathematics and science for K-12 teachers, ethics in the secondary curriculum, and the development of an assessment of scientific creativity potential in high school students.

**Innovation and Entrepreneurship**

Launching in 2009-10, CoolHub.IMSA creates, facilitates and supports easy-to-scale collaborative innovation networks to advance and transform STEM teaching and learning. Unique physical and virtual meeting spaces and the intellectual capital of a dynamic, diverse network enable learners of all ages to explore questions, develop ideas and innovate together, within and, more importantly, outside of formal educational structures. Primary users of CoolHub.IMSA resources are innovators and early adopters who see the future of STEM teaching, learning and talent development in the digital age and work differently, in robust collaborative networks made possible by Web 2.0 technologies. A broad range of projects engages teachers, students, scientists and others in finding innovative solutions to present day challenges, such as improving water quality, producing alternate sources of energy more efficiently and enabling global integration of remote learning communities through the use of technology.
IMSA’s Total Applied Learning for Entrepreneurs (TALENT) program focuses on student entrepreneurship in a STEM context. IMSA TALENT 2.0 provides on-campus, off-campus and virtual learning experiences to stimulate and encourage entrepreneurial projects by IMSA students. Some develop their ideas for a business, product or service and present them to venture capitalists and entrepreneurial leaders in a Power Pitch contest; this features cash prizes which students may use to further advance their ideas.

Alumni

3,970 graduates, Classes of 1989-2009

98% enrolled in college, 47% in-state and 53% out-of-state (Classes of 2006-09)

The five Illinois colleges or universities that enrolled the highest number of IMSA graduates (Classes of 2005-2009) include University of Illinois at Urbana-Champaign, University of Illinois at Chicago, The University of Chicago, Northwestern University and Illinois Institute of Technology.

The five out-of-state colleges or universities that enrolled the highest number of IMSA graduates (Classes 2005-2009) include Case Western Reserve University, Duke University, Massachusetts Institute of Technology (M.I.T.), Carnegie Mellon University and Washington University in St. Louis.

IMSA’s highly accomplished graduates are forging new frontiers as nationally recognized scientists, entrepreneurs, engineers, information technology specialists and leaders in other fields. IMSA alumni have been featured for their next-generation technological applications by Business Week, Fortune, Good Morning America, The Wall Street Journal and the annual Webby online achievement awards. IMSA alumni were part of the start-up teams that created Netscape, PayPal and YouTube. As volunteers for IMSA and donors to the IMSA Fund for Advancement of Education, their gifts of “time, talent and treasure” increase IMSA’s capacity to achieve its mission and goals. For profiles of IMSA’s Board of Trustees Alumni Awards recipients, visit www.imsa.edu/alumni/awards.

Professional Staff

IMSA conducts national searches for many members of its exemplary professional staff, which include presidential award winners, published authors and a Nobel Laureate in physics. All faculty members have advanced degrees with 49% holding doctorate degrees. In addition, 23% of faculty members are certified by the National Board of Professional Teaching Standards (NBPTS). View organization chart here.

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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.

Freedom of Information Act Materials can be found here.