

2007-08 IMSA® Quick Facts

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 **International Physics Olympiad** and the **High School Mathematical Contest in Modeling**.

IMSA's **highly accomplished graduates** are now forging new frontiers as nationally recognized scientists, entrepreneurs, policy makers 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.

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 also ensure that young students, particularly the underserved, have opportunities to excel in mathematics and science.

What is IMSA®?

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. (www.imsa.edu)

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 Board of Higher Education appropriation.

Residential College Preparatory Program for IMSA Students

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

IMSA is tuition-free. An annual student fee is assessed based on family size and income.

Academic Program

IMSA's goal 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) and Total Applied Learning for Entrepreneurs (TALENT) programs** enable 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

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 cocurricular activities.

The 653 IMSA students represent the geographic, ethnic, racial and socioeconomic diversity of Illinois.

- 68 % from Chicagoland/metropolitan area; 32% from greater Illinois
- 50% male; 50% female
- 5% Latino/a; 8% African American; 36% Asian American; 43% White; less than 1% Native American; 2% Not Reported/Other; 6% Multi-ethnic

The Mean SAT I scores for IMSA's Class of 2007 include the following: 658 for critical reading (156 points above the national average for college-bound seniors); 715 for math (200 points above the national average) and 651 for writing (157 points above the national average). The Mean ACT composite score for IMSA's Class of 2007 was 30.3, 9.1 points above the national average for college-bound seniors.

Multicultural Development

A high priority of IMSA is to serve students who have talent and interest in mathematics and science from underrepresented and underserved populations. In order 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 Science and the Early Involvement Program.

IMSA Programs Serving Educators and Students in Illinois and Beyond

IMSA's Excellence 2000+ Program (E2K+) was selected as one of the "Best Practice" Science, Technology, Engineering and Mathematics Programs to be showcased at the STEM Education Diversity Forum hosted by Bayer Corporation in Washington, D.C.. IMSA's E2K+ Program was cited for having "a proven track record of helping girls and underrepresented minorities to participate and achieve in STEM."

Statewide Service

IMSA's statewide programs help to improve teaching and learning in mathematics, science and technology. They include:

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 special emphasis on students who are historically underrepresented and underserved in these content areas. These students are taught by teachers at their schools who receive professional development from IMSA staff.

Schools must apply to participate in the program. The application is available by clicking on What's New? at www.imsa.edu/programs/e2k. More than 1,000 students and 300 teachers participated in 2006-07.

IMSA Kids Institute® (K.I.) - Offers various programs of hands-on enrichment activities for 3rd-9th graders on the IMSA campus and throughout Illinois, integrating concepts of science, mathematics and technology with the humanities. These programs and products served more than 3,300 students during 2006-07. They 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 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 6th-9th grade students. For more information on PBL, visit www.imsa.edu/programs/pbln.

21st Century Information Fluency Program (21CIF) - Offers professional development for more than 1500 Illinois school media/technology specialists and teachers to learn the secrets of finding rich educational resources on the Internet. The IMSA 21CIF Web site (<http://21cif.imsa.edu>) features resources for teaching and learning digital information fluency.

Illinois Virtual High School (IVHS) - IMSA was a founding partner of the Illinois Virtual High School (IVHS) and today fully manages and administers the program on behalf of the Illinois State Board of Education (ISBE). Since the 2000-01 year, IVHS has provided “anytime, anyplace” offerings to thousands of students in high school and some middle school classrooms throughout Illinois. Today, one out of every three high schools in Illinois uses IVHS services. It also provides limited online professional development courses for Illinois educators.

Illinois Technology Immersion Pilot Project (TIPP) - IMSA plays a key role in the Technology Immersion Pilot Project, a three-year pilot designed to bring a one-to-one wireless computing environment to more than 1700 sixth grade students and their teachers in 18 schools throughout the state. Aimed at helping to bridge the digital divide in Illinois middle schools, the Illinois Virtual High School (administered by IMSA) provides the professional development component of TIPP through online courses and on-site sessions with teachers, administrators and technology support staff.

Research and Evaluation

IMSA conducts institutional research to inform program development and policy recommendations. Examples include conducting longitudinal studies of IMSA graduates; assessing the impact of IMSA programs on school systems, teacher practice and student learning in partner schools; assisting faculty, staff and students in their research studies; facilitating investigations related to both teaching and learning in IMSA’s academic programs; and coordinating the academic program review process.

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 have at least a master’s degree with 53% holding a doctorate degree and 27% holding certification with the National Board of Professional Teaching Standards (NBPTS).

Alumni

3,564 graduates, Classes of 1989-2007

99% enrolled in college, 57% in-state and 43% out-of-state (Classes of 2002-2006)

The five Illinois colleges or universities that enrolled the highest number of IMSA graduates (Classes of 2002-2006) include the Illinois Institute of Technology, Northwestern University, The University of Chicago, University of Illinois at Chicago and University of Illinois at Urbana-Champaign. The five out-of-state colleges or universities that enrolled the highest number of IMSA graduates include Carnegie Mellon University, Cornell University, Harvard University, Massachusetts Institute of Technology (M.I.T.), Stanford University (tied with Carnegie Mellon) and Washington University in St. Louis.

Many alumni are making their mark in Illinois and beyond as award-winning scientists, nationally recognized entrepreneurs, information technology specialists, engineers and leaders in other fields. As volunteers for IMSA and donors to the IMSA Fund, their gifts of “time, talent and treasure” increase IMSA’s capacity to achieve its mission and goals. For a listing of IMSA’s Board of Trustees Alumni Awards recipients, visit www.imsa.edu/alumni/awards.

Funding

IMSA’s operating budget is funded largely by the State of Illinois, which supports most on-campus and some statewide programs and services. Cocurricular 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 and private donations for internal and external programs which are received through the IMSA Fund for Advancement of Education (IMSA Fund). Examples of major donors to the IMSA Fund in the last year include Michael and Kay Birck, ComEd, An Exelon Company, Paul Galvin Memorial Foundation Trust, Grand Victoria Foundation, Lehman Brothers Foundation, Michael McCool ’91, Polk Bros. Foundation and the Tellabs Foundation. A new endowment program will 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 and government and private sector grants, gifts and contracts for every \$4 of state funding.

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