

Expanding Opportunities for Student Inquiry and Research

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IMSA's Mission: *To ignite and nurture creative, ethical, scientific minds that advance the human condition.*

What is IMSA?

- A teaching and learning lab founded by the Illinois state legislature in 1985 with the help of Nobel laureate Dr. Leon Lederman
- Public, tuition-free, residential high school enrolling a diverse student body of 650 students from all areas of Illinois; admission is highly competitive
- Institutional centers
 - Center for Teaching and Learning
 - Center for Innovation and Inquiry

Student Inquiries in Research (SIR)

- Students perform research either on or off campus on “I” days (usually Wednesdays) during the academic year
 - Some students also do SIR summer research
- It is not required, however about 2/3 of the students will do an SIR project
- The goal of the program is to teach students how to carry out authentic research
- Every student will give a presentation on their research at IMSAloquium in April

Recent Changes to the SIR Program

- Instead of an administrative program director it is run by a team of three faculty members
- Other faculty members can offer SIR “courses” where they mentor at least eight students
- The SIR “course” counts as one of the four courses taught for these faculty members
- This has tremendously increased the number of students who do research on campus

Recent Changes to the SIR Program

- Last year there were 120 off-campus SIRs and 65 on-campus SIRs
- This year there are 116 off-campus SIRs and 116 on-campus SIRs
- 47 more students are doing SIRs this year compared to last year
- 51 more on-campus SIR students

<u>Site</u>	<u>Students</u>	<u>Site</u>	<u>Students</u>
NIU	11	NCC	4
Northwestern	10	NW Chicago Proton Ct	2
NorthShore Health	1	Argonne National Lab	2
UChicago	12	Ball Horticultural	2
Univ of IL @ Chicago	10	FermiLab	13
Rush Medical	4	Chicago Cubs (remote)	1
NW Feinberg Medical / Lurie	33	UPenn (remote)	1
Loyola Medical	1	Loyola Univ (remote)	1
Morton Arboretum	4	Univ of IL @ Chicago (remote)	1
Benedictine Univ	3		
		Total student number	116

79 Off-campus advisers

12 Universities

7 other research facilities

IMSA research courses

Drug Discovery

Protein Engineering and Drug Targets

Glioblastoma

Environmental Phage Identification

Water Purification

IMSA-CMS (partnership with CERN)

Econometrics

92

IMSA other SIRs

24

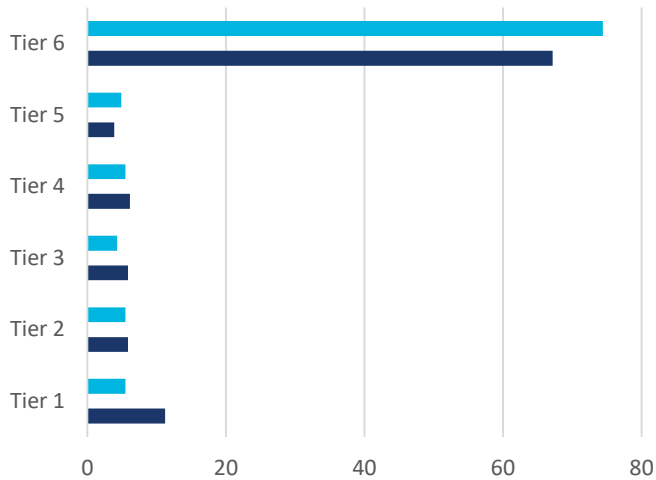
Total Student Number

116

14 On-campus advisers

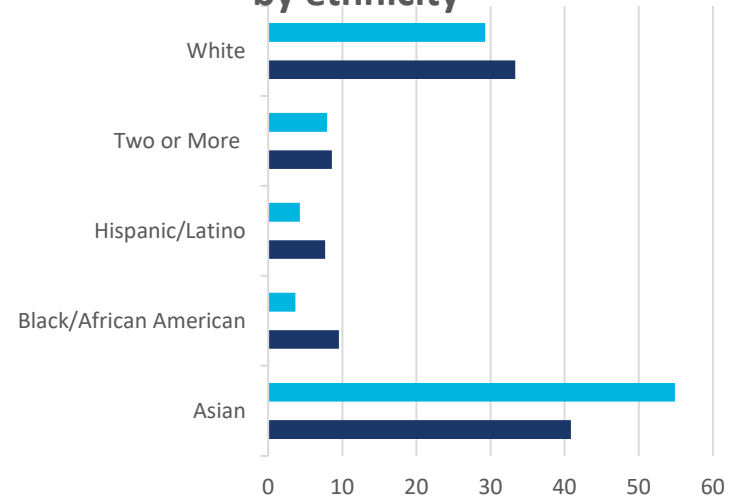
Student demographics

SIR (light blue) and total IMSA (dark blue) student percentages by economic tier



Tier 6 students moderately over-represented in SIR; Tier 1 students under-represented in SIR

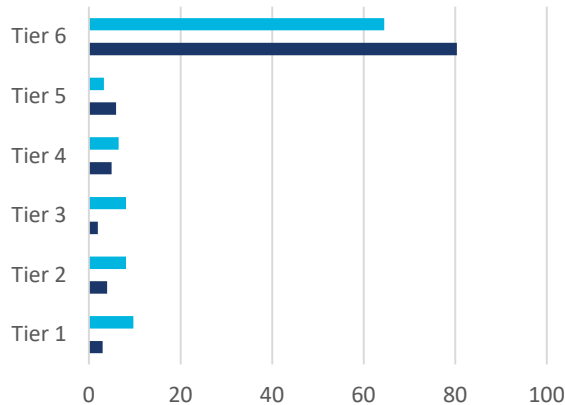
SIR (light blue) and total IMSA (dark blue) student percentages by ethnicity



Asian students over-represented in SIR by percentage; Hispanic/Latino and Black/African American students both under-represented by percentage

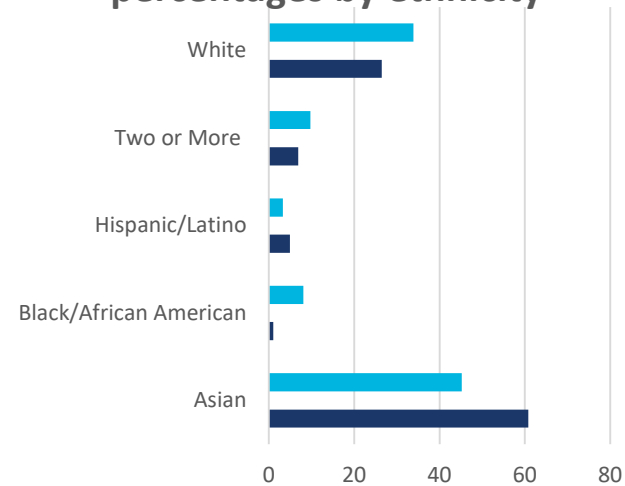
Student demographics

On-campus (light blue) and off-campus (dark blue) percentages by economic tier



Tier 6 students prefer off-campus SIR assignment; Tiers 1, 2, and 3 students prefer on-campus SIR assignments

On-campus (light blue) and off-campus (dark blue) percentages by ethnicity



Asian students prefer off-campus SIR assignment; White students moderately prefer and Black/African American students prefer on-campus SIR assignments

IMSA Digital Commons

- IMSAloquium abstract booklets going back to 1989: https://digitalcommons.imsa.edu/abstract_booklet/

6,273 full text downloads by 354 institutions (primarily education, organization, and government) in 91 countries

- IMSAloquium has been online for the last 4 years - all abstracts and the inclusion of the largest number of actual presentations and posters from 2019/Session 3: https://digitalcommons.imsa.edu/sir_presentations/

2,970 full text downloads by 230 institutions (primarily education) in 75 countries

- We have been adding student articles and conference papers/presentations in Student Publications and Research since 2011: https://digitalcommons.imsa.edu/student_pr/

6,686 full text downloads by 665 institutions (primarily education and organization) in 103 countries

Thank you for your
attention!

Questions?