

# Undergraduate Programs and Initiatives

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Indiana University Bloomington

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# Luddy History

- **2000**, School of Informatics
- **2005**, School of Informatics  
(CS joined the school)
- **2009**, School of Informatics and Computing
- **2013**, School of Informatics and Computing  
(SLIS joined the school)
- **2015**, Intelligent Systems Engineering Department and Program were approved
- **2017**, School of Informatics, Computing, and Engineering
- **2019**, Luddy School of Informatics, Computing, and Engineering

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- Department of Information and Library Science (graduate program)
- Department of Intelligent Systems Engineering
- Data Science Program
- Cybersecurity and Global Policy Program (jointly with HLS)



- Undergraduate Degrees
  - Bachelor of Science in Informatics: 1309 students  
5th largest major on campus!  
Cognates in 20+ areas
  - BSc Informatics → MSIS (Kelley School of Business)
  - BSc Informatics → MIS (ILS)
  - Certificate in Informatics
  - Minor in Human-Centered Computing
  - Minor in Informatics
  - Minor in Security Informatics

- Undergraduate Degrees
  - Bachelor of Science in Computer Science: 528 students  
(Specializations: AI, PL, Systems, Foundations, Security, Data Science, Software Engineering, Game Development)
  - Bachelor of Arts in Computer Science  
(Administered by the College of Arts and Science)
  - Accelerated Master's Program in Computer Science
  - Minor in Computer Science
  - Minor in Information Technology

- Undergraduate Degrees
  - Bachelor of Science in Intelligent Systems Engineering: 113 students (Concentrations: Computer Engineering/Cyber-physical Systems, Bioengineering, Molecular Nanoscale Engineering)
  - Accelerated Master of Science in Intelligent Systems Engineering

# Data Science Program

- Bachelor of Science in Data Science
  - Mathematics and Science Foundations
  - Data Science Core (25 cr)
  - Specializations
    - 1 Foundational Data Science
    - 2 Data Systems
    - 3 Networks and Applied Data Analytics
    - 4 Data Science Design
    - 5 Biological and Health Data Science

# Cybersecurity and Global Policy Program

- Bachelor of Science in Cybersecurity and Global Policy
  - Technical Foundations (16 cr)
  - Policy Foundations (12 cr)
  - Cybersecurity Core (13.5)
  - Global Policy Core (12)

# Major Initiatives

- Direct Admission
- Living-Learning Center
- International Experience
- Undergraduate Research
- Diversity
- Computing Education Outreach

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- Students admitted to IU
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- Idea: Grow the cohort size in the first category above



## Direct Admission by the Numbers (Info and CS)

<b>Year</b>	<b>Total admits</b>	<b>Direct Admits</b>	<b>Direct/Total</b>
2013	212	30	14%
2014	231	52	23%
2015	282	88	31%
2016	280	101	36%
2017	278	98	35%
2018	326	117	36%
2019	319	158	50%

## Direct Admission by the Numbers (ISE)

<b>Year</b>	<b>Total admits</b>	<b>Direct Admits</b>	<b>Direct/Total</b>
2016	36	25	70%
2017	35	27	77%
2018	63	53	84%
2019	65	48	74%

# Support System for DAs

- Scholarship
- Various programs designed by Student Services staff
- InWIC trip for female freshman students
- GHC trip for female junior students

# Living-Learning Center

- Student Engagement and Success
- Teter Hall, 5th floor, 54 students, co-ed
- Started in Fall 2017
- Two floors in 2020!

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  - ④ University of Sorbonne
  - ⑤ University of Edinburgh, School of Informatics

# IE cont'd

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- International Serve/Teach-IT (Belize: 2015, 2018)

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- Opportunities for early encounters with real world problems
- Opportunities to develop skills for working in teams, staying focused, accepting uncertainty
- Opportunities for early encounters with faculty and graduate students

- NCWIT Pacesetter Team for the third time!
- Collaborative plans with Hudson & Holland Scholars Program and Groups Scholars Program
- Various programming for women and URM in computing



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- 3 Students who learn CS in high school are 6 times more likely to major in it, and women are 10 times more likely.
- 4 After June 30, 2021 every school in Indiana is required to incorporate computer science in K-12 curriculum.

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- This is not a bubble!
- Information technology is everywhere.
- Computing is integrated into everyday life.
- Data is everywhere and more is being generated every second.



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4 Eiffel Towers high!!
- By 2025, it's estimated that 463 exabytes ( $10^{18}$ ) of data will be created each day globally.  
185 million blu-ray discs per day!

Here are some key daily statistics:

- 500 million tweets are sent
- 294 billion emails are sent
- 4 petabytes of data are created on Facebook
- 4 terabytes of data are created from each connected car
- 65 billion messages are sent on WhatsApp
- 5 billion searches are made

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- 67% of new STEM jobs are in computing.
- Only 10% of STEM graduates are in Computer Science.

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- Diversity and Inclusion
- Entrepreneurship and Innovation
- Innovation in education, staying relevant and current
- Full spectrum student care

# Thank You!

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