


Johns Hopkins School of Medicine
Biomedical Informatics & Data Science



Admissions Information Session Informatics Education Program (IEP)

Presented by: Directors, Faculty, Staff, Students, and Alumni of the BIDS IEP

December 7, 2022

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Starting with an invitation...



The Future of Imaging Informatics Across the Enterprise

Informatics Grand Rounds
Join us on December 8th at 12 PM EST to hear Dr. Tessa Cook discuss the field of imaging informatics and how it can unlock the quintuple aim in healthcare.

Tessa Cook MD, PhD, CEF, FRCR, FRCR
Senior Professor of Radiology
President, Journal of Medicine
University of Pennsylvania

December 8th
12 PM EST
12/8/2022

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Who remembers the famous Radio Shack slogan?



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Agenda for Today's Session



- 1) Introduce you to some alumni, students, faculty, and staff.
- 2) Provide basic information about the BIDS Informatics Education Program and its offerings
- 3) Provide answers to "Frequently Asked Questions" (FAQs)
- 4) Answer other questions you may have about the program or about admissions

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Who are the presenters & panelists?



- Ed Bunker, MPH, MSc (Associate Director for Admissions, Capstone Director)
- Joe Mercado, MS (MS Applied Graduate & Instructor)
- Natasha Palamuttam (MSc Research Graduate & Instructor)
- Steven Miller, MD (Certificate Graduate & Instructor)
- Emir Amaro Syailendra (MSc Research Student)
- Jenn Park (Current PhD Student Student)
- Zack Wang (Current MS Applied Student)
- Paul Nagy, PhD (Education Director & MS Applied Program Director)
- Hadi Kharrazi, MD, PhD (PhD & MSc Research Program Director)

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Ed Bunker MPH ('94), MSc ('06)



- MSc Research Graduate (2006)
- Research Associate in BIDS
- Associate Director for Admissions & Advising
- Capstone and Practicum Course Director



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Joe Mercado MS ('19)



- MS Applied Program Graduate (2019)
- Director of Product for CareJourney
- Current Instructor & Advisor
- Acts as Course Coordinator for several BIDS Courses



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Natasha Palamuttam MSc ('21)



- Clinical Data Analyst II at Penumbra, Inc.
- 2021 Graduate of the MS Applied Program
- Instructor



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Steven Miller MD



- Assistant Professor of Pediatrics
- 2021 Graduate of the Clinical Informatics Certificate
- Current Instructor



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Emir Amaro Syailendra MD



- Current MSc Research Student
- Clinician from Indonesia
- Attended medical school at Universitas Sriwijaya



SL

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Jen Park



- Current PhD Student
- Worked at Memorial Sloan Kettering Cancer Center and at Blink Health



SL

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Zachary (Zack) Wang



- Current MS Applied Student
- Computer Science Graduate of University of Chicago



SL

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Paul Nagy PhD, FSIIM

- Director of the Informatics Education Program
- Lead Instructor for several Data Science courses
- Associate Professor of Radiology
- Deputy Director of the Johns Hopkins Medicine Technology Innovation Center (TIC)



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Hadi Kharrazi MD, PhD

- Co-Director of the Johns Hopkins Center for Population Health IT (CPHIT)
- Associate Professor of Health Policy and Management
- Director of the MSc Research Program and PhD Program
- Director of the DrPH Program in Public Health Informatics
- Lead Instructor for several informatics courses



HK

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In the chat box, type the name of the program you are most interested in hearing about today?

- *MSc Research*
- *MS Applied On-Site / Full-Time*
- *MS Applied On-Line / Part-Time*
- *Certificate*
- *PhD*
- *Post-Doc*



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In the chat box:

Type your primary professional or academic identity, e.g., doctor, nurse, student, researcher, computer programmer, statistician, innovator, etc.



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Type "Yes" in the chat box if you are interested in data science.



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Questions

- What exactly is Health Informatics?
- How is it differentiated from Data Science?

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Programs

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Overview of Programs

- **PhD (Full-Time)**
 - On Campus
 - Open to non-U.S. Citizens / F1 Visa eligible
- **MSc in Health Sciences Informatics Research (Full-Time)**
 - On Campus
 - Open to non-U.S. Citizens / F1 Visa eligible with 1-Year OPT
- **MS in Applied Health Sciences Informatics (Full-Time)**
 - On Campus
- **MS in Applied Health Sciences Informatics (Part-Time)**
 - Online
 - Open to non-U.S. Citizens
- **Post-Baccalaureate Certificate in Clinical Informatics (Part-Time)**
 - Online

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PhD Program

- On-Campus, Full-Time Commitment for 4+ Years
- Dissertation-focused
- 4 Years of funding, including tuition, stipend, and student health insurance.
- Competitive (I.e., ~2 or 3 admitted each year)

HK

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Question

- What is the IEP looking for in an PhD candidate?

HK

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MSc Health Sciences Informatics Research

- Campus-based
- Full-time
- Completed in **2 years**
- 96 quarter credits program, including a thesis
- Current tuition is \$59,700 per year (x2 years) = **\$119,400**
PLUS... Living and other expenses need to be considered
- Financial aid may be available to U.S. Citizens and Permanent Residents
- Currently, no scholarships available
- Eight slots available

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Question

- What is the IEP looking for in an MSc Research candidate?



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Question

- What is the MSc Research program like from a student's perspective?



NP

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MS Applied Health Sciences Informatics (Onsite)

- Campus-based
- Full-time
- Completed in 1 year
- 60 quarter credits program, including a capstone
- Current tuition is \$59,700 for the year
- Financial aid may be available
- Option for a Data Science Track
- Open to U.S. Citizens and Permanent Residents



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MS Applied (Online)

- Online program
- Part-time
- Completed in 1.5 to 3 years
- 60 quarter credits program, including a capstone
- The cost per credit for 2022-23 is \$1270 per credit
 - Students receive a tuition subsidy of \$275 per credit
- Financial aid may be available
- Option for a "Data Science" Track
- Open to ALL applicants



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Question

- What is the IEP looking for in an MS Applied candidate?

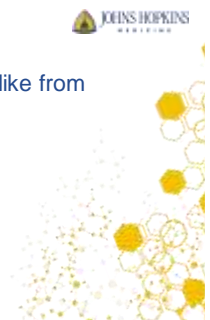


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Question

- What is the MS Applied program like from a student's perspective?



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Post-Baccalaureate Certificate



- Online program
- Part-time
- Completed in 1-3 years
- 21 quarter credits program, including a practicum
- Cost per credit for 2022-23 is \$1270 per credit
 - Students receive a tuition subsidy of \$275 per credit

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Question



- How might a certificate in health informatics be valuable?
- Specifically for clinicians?

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Question

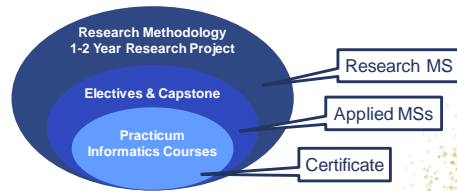


- Where and how do Data Science and Precision Medicine enter the curricula for the master's and certificate programs?

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Data Science in the Curriculum



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Precision Medicine Analytics Platform (PMAP)



<https://pm.jh.edu/how-it-works/>

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Question



- After graduating from the master's or certificate program, what types of jobs might I be able to have?

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Our Graduates Have...

- Lead or participated in informatics or digital health research efforts for private health technology firms, academic research centers, and non-profit agencies
- Served as informatics specialists in academia, government, health systems
- Worked as data scientists in academia or government
- For those with medical degrees, served as CMIOs
- Pursued PhDs in informatics or data science



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Courses (Examples!)



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Introduction to Precision Medicine Data Analytics



Leverage the JH Precision Medicine Analytics Platform (PMAP) to learn about:

- Cloud computing in reproducible clinical research
- Utilizing Python for EMR Analysis
- Data management for clinical registries
- Deploying AI algorithms into clinical care



Paul Nagy
PhD, FSIM
Director of Education
Biomedical Informatics and Data Science



Stephen Miller
MD
Assistant Professor
Pediatrics

- ME 250.771
- Live on MS Teams | Tuesdays 7-8:30 PM EST
- Faculty & staff may qualify for tuition remission
- Contact JHinformatics@jhu.edu with questions

SM or PN

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Introduction to Public Health and Biomedical Informatics



In this online course, you will learn about:

- Core principles of informatics
- Frameworks for health information systems
- Concepts of clinical care and public health



Harold P. Lehmann
MD, PhD
Professor
Health Sciences Informatics



John Loonsk
MD, FACMI
Adjunct Associate Professor
Health Policy & Management

- ME 250.953.0: 8/30-10/25
- Live on Zoom
- Faculty & staff may qualify for tuition remission
- Contact JHinformatics@jhu.edu

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Clinical Data Analysis with Python



Are you interested in:

- Leveraging our precision medicine platform to work on large EMR datasets
- Using Jupyter notebooks & Python for data analysis with the OMOP Common data model
- Hearing from luminaries from the Observational Health and Data Science Informatics community
- Gaining practical experience with data science tools (Leaf, Atlas, Athena, & Phenotype Library)



Paul Nagy
PhD, FSIM
Associate Professor
Health Sciences Informatics

Enroll in the fully online course!

- ME 250.770: Q2 (Online: Mon, 5pm)
- Faculty & staff may qualify for tuition remission
- Contact JHinformatics@jhu.edu for more info

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Question

- What types of linkages and connections does the IEP program have?



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Technology Innovation Center (TIC)



Paul Nagy PhD
BIDS Education Director
Deputy Director - Technology Innovation Center



tic.jh.edu

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Examples of other connections



- OHDSI
- Center for Public Health IT (CPHIT)
- Jhpiego (an international NGO)
- Department of Biomedical Engineering
- School of Public Health
- Alumni (e.g., WellDoc)
- Advisory Board (e.g., Amazon)

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Administrative



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Departmental Staff





Susan Kerfoot
Academic Program Manager
smroz@jhmi.edu



Stacey Counts
Administrative Coordinator
sszczyp1@jhmi.edu

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Application Process



- Create an account: <https://applygrad.jhu.edu/account/register>
- Submission Deadline
 - PhD, January 15th, 2023
 - All Other Programs, March 15th, 2023

SK

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Application Components



- Basic demographic and application information
- Personal Statement
- Transcripts
- References
- Resume or CV
 - CV recommended for the PhD & MSc Research program applicants
- TOEFL
 - More on this
- Payment
- *Optional: Writing sample; GRE Scores*

SK or EB

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Tuition Remission & Financial Aid

- Johns Hopkins Health System Employees
 - \$10K per fiscal year in tuition if formally enrolled in the Master's degree program
 - Contact Human Resources
- JHU Employees (faculty and staff)
 - ~\$10,000 in reimbursement per year for credit-bearing courses
 - Contact Human Resources
- Questions about Financial Aid?
 - <https://www.hopkinsmedicine.org/som/offices/finaid/applying-for-aid/eligibility.html>

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Question

- What about GREs and TOEFL?

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FAQs

- Most frequently asked questions are about GREs and TOEFL
- These questions may need to be reframed slightly

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FAQs Reframed

- What type of *proficiencies* do I need with math and English to succeed in the IEP programs?

...and in the fields of health informatics and data science?

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Math Proficiency (and the GRE)

- Informatics concerns collecting, managing, and using data. Success in the IEP (and in the field of informatics!) requires proficiency with math and comfort with data.
- If you choose not to submit GRE scores, the Admissions Committee will need to see other evidence, either college-level course work in math and/or professional work, that demonstrates proficiency or basic ability.
 - The MSc Research Program requires proficiency with quantitative methods (e.g., statistics) for your research thesis.

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English Proficiency (and TOEFL)

High-level of proficiency with English is critical to success in the IEP program: reading, writing, speaking and self-expression, oral comprehension, and reasoning.

- If you graduated from a U.S. college or university (or will shortly), the TOEFL exam requirement is waived.
- If you have not graduated from a U.S. college or university, TOEFL exam scores are required. Waivers from submitting TOEFL scores will be granted on a case-by-case basis.

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Student Experience



What is the student experience like?

What is it like to move to and live in Baltimore?



Students

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Student Organizations



"Your source for student living"
Find more at <http://gsa.jhu.edu>

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Q&A



- What questions do YOU have?



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What's Next?

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Question



Do you want to speak to someone one-on-one to discuss your career goals and to determine which program might be best?



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Have we got a deal for you!



Contact Ed Bunker
ebunker@jhu.edu



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Follow us on LinkedIn



<https://www.linkedin.com/school/jhinformatics>

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Follow us on Twitter



@jhinformatics

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Thank you for attending today's Admissions Information Session. We look forward to hearing from you!

General questions: JHInformatics@jhu.edu

Student Advising: ebunker@jhu.edu



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