MCEH Internship @ Johns Hopkins Medicine

Internship title	System Design and Improvement Intern
Reports to	Senior Director for Systems Engineering, The Johns Hopkins Hospital and Health System Armstrong Institute for Patient Safety and Quality

Internship purpose

The System Design and Improvement Intern will join the Armstrong Institute Systems Engineering team working to eliminate preventable harm and improve patient outcomes and experience, and enhance value in healthcare. The team applies systems engineering, data science and quality assurance methodologies and tools to achieve these aims.

This internship provides an amazing opportunity to learn firsthand about healthcare systems, how they function, and how information technology supports the provision of care at a premier academic medical center. The work involves improving our operational understanding of the complex system of systems including people, processes, technology and information. The intern will help assure end-to-end reliability of data representing the safety and quality of clinical care. This internship provides the opportunity to explore ways to synthesize and present data, from a wide variety of sources and methods, to provide the foundation for system improvement.

Duties and responsibilities

- Interview managers and staff from a wide variety of roles and responsibilities to improve the design and function of systems critical to enterprise goals
- Systematically trace system functionality and interfaces
- Create visualizations and documentation of complex systems
- Effectively analyze and communicate work products verbally and through documentation, data products and presentations
- Create a poster and present the results of the internship at the Johns Hopkins Research Symposium on Engineering in Healthcare, Nov 2020

Qualifications

- Sophomore or above in engineering, informatics, computer science, management, applied math, statistics, medicine, or other field that relates to understanding and improving systems of people, processes, technology or information. Strong rising juniors preferred. Graduate students welcome.
- Ability to draw workflow and data flow diagrams.
- Ability to translate technical information to non-technical audiences.
- Ability to work with large datasets, perform data analysis and create reports.
- Proficiency in written communication
- Strong interpersonal skills and ability to work as a member of an interdisciplinary team.

The successful candidate will have experience using the following software applications and/or programming languages:
Required: Excel, PowerPoint
Preferred: Visio, Tableau

Working conditions and physical requirements

Indoor- shared office environment
Possible exposure to clinical setting (observing workflow)
Ability to physically operate computer
May need to lift up to 20 lbs

Compensation

One academic credit for a minimum duration of 120 hrs, flexible schedule

Anticipated Start Date

As soon as possible

Duration

Winter intersession / Spring, 2020
Possibility for extended internship (up to 9 months) and/or permanent employment, if there is interest on both sides

Location

The Johns Hopkins Hospital, 600 North Wolfe Street, Baltimore, MD 21287

Application Process

Email your resume and one paragraph describing what you are looking to gain from this internship to Vess Vassileva-Clarke: vclarke@jhu.edu.

Please include the name, email address and/or telephone # of your academic adviser (faculty member who advises you).

Use Subject line "MCEH System Design and Improvement Internship, 2019 - 2020" for your email.

Position will remain open until filled. Applications received **on or before Dec 15, 2019** will be given first consideration.