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# Doctor of Philosophy in Information Systems & Technology

USIU-Africa is accredited in Kenya by the Commission for University Education (CUE) & the United States of America by WASC Senior College and University Commission respectively.



## PROGRAM DESCRIPTION

The PhD in Information Systems & Technology is a Science, Technology, Engineering and Mathematics (STEM) designated degree program which stresses technical, societal and organizational aspects of information systems and technology. The mission of PhD. IST is to provide an opportunity for experienced computing professionals to refine and extend their knowledge and skill at an advanced level by treating ICT as an ecosystem beyond Internet access (communication infrastructure), and encompasses multiple elements: ICT human resources; ICT industries and services; ICT applications (informatics) in government, business and finance, and civil society organizations; ICT in various sectors (education, health, agriculture); ICT policies and regulations; and ICT in institutional leadership.

## LEARNING OUTCOMES

1. Evaluate conceptual and theoretical arguments of Information Systems and Technology architecture.
2. Apply Information Systems and Technology knowledge, skills and values to solve issues in organizations and the society.
3. Design, conduct and disseminate research on Information Systems and Technology issues that impact organizations and the society.

## CORE COURSES

42 UNITS

|          |   |         |
|----------|---|---------|
| PIS 8110 | Advances in Cloud Computing                                 | 3 Units |
| PIS 8120 | Problem Solving Paradigms in Informatics                    | 3 Units |
| PIS 8130 | Computing Research Methods I                                | 3 Units |
| PIS 8140 | Advanced Topics in Cryptography and Blockchains             | 3 Units |
| PIS 8150 | Research Seminar  | 3 Units |
| PIS 8160 | Information Systems Theories                                | 3 Units |
| PIS 8170 | Advances in Machine Learning                                | 3 Units |
| PIS 8180 | Advanced Statistical Techniques                             | 3 Units |
| PIS 8190 | Computing Research Methods II                               | 3 Units |
| PIS 8210 | Information and Communications Technologies for Development | 3 Units |
| PIS 8220 | Qualitative and Quantitative Research Methods               | 3 Units |
| PIS 8230 | Information Security Governance                             | 3 Units |
| PIS 8240 | Comprehensive Exams (Oral and Written Exams)                | 6 Units |

## DISSERTATION

30 UNITS

|          |   |         |
|----------|---|---------|
| PIS 8250 | Thesis Proposal Writing and Defense     | 9 Units |
| PIS 8310 | Thesis Implementation/Data Collection   | 9 Units |
| PIS 8320 | Thesis Data Analysis and Report Writing | 9 Units |
| PIS 8330 | Thesis Thesis Defense (PhD Viva)        | 3 Units |

### Comprehensive Exams

A successful completion of the course work will be followed by a comprehensive written examination.

The pass mark of 80% (B grade) will apply to the comprehensive examination.

### PhD Thesis

A student shall only be allowed to embark on their thesis only after successfully completing the coursework and passing the Comprehensive Examinations.

### Degree Completion Timeline

The students must publish 2 papers in refereed peer journals to graduate. The maximum amount of time for completing a PhD. IST degree is 6 (Six) years. An approved Leave of Absence does not change the time limits.






## CAREER OPPORTUNITIES

1. Information Systems Researcher
2. University Professor/Lecturer
3. Chief Technology Officer (CTO)
4. IT Consultant
5. Data Scientist
6. Enterprise Architect
7. Cybersecurity Strategist
8. Artificial Intelligence (AI) Specialist
9. Digital Transformation Director
10. Government Policy Advisor

## CONTACTS

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