



DANIEL DANSO ESSEL

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LECTURER

Dynamic hardworking individual with an enthusiasm and passion to learn, adapt, research, develop and implement sound teaching and learning innovations in the field of Information and Communication Technology Education and its related disciplines. Also concerned with using information technology in innovative and practical ways to solve societal problems.

CORE COMPETENCIES: Information Technologies for Education, Educational Software Development, Network & Database Systems Management, Project Management, Robotics among others.

PROFESSIONAL EXPERIENCE

UNIVERSITY OF EDUCATION, WINNEBA, C/R

2011 – PRESENT

Lecturer

Lecturer in the Department of Information Technology Education for the following courses; Advanced Software Development, Event Driven Programming with Dot Net, Object Oriented Programming with Java, Introduction to Computer Programming (C++), Educational Software Development, Data Structures and Algorithms, Emerging Technologies in Education, Ethical and Security Issues in Technology Use, Introduction to Distance Education and Online Learning

GARDEN CITY UNIVERSITY COLLEGE, KUMASI, A/R

2009 – 2011

Lecturer

Lecturer in the School of I.C.T for the following courses; Web Development and Technologies, Cryptography and Network Security, Software Engineering, Computer Professional Ethics, Artificial Intelligence and Operating Systems

KOFORIDUA TECHNICAL UNIVERSITY (FORMERLY KOFORIDUA POLYTECHNIC), KOFORIDUA, E/R

Lecturer (Part-Time)

2009 – 2011

Lecturer in the Computer Science Department for the following courses: Computer Networking, Network Topology, Security Concepts, Programming with Java

INDUSTRIAL ATTACHMENT, IT DEPARTMENT, ELECTRICITY COMPANY OF GHANA. 2005

IT Staff

Performed routine computer maintenance and provided IT assistance to staff.

PROMOTORA ENGINEERING SERVICES LIMITED. 2002, 2004

Teacher (Part-Time)

Taught Microsoft Office Suite, CorelDraw Package

WORK EXPERIENCE

OTHER PROFESSIONAL ACTIVITIES / COMMUNITY SERVICE

Facilitator (ULMEC Team) - Training of academic staff on the use of MOODLE for academic work, UEW	Jan 2021 – Present
Team Leader, Development of B.Sc. Software Engineering programme for Department of ICT Education, Winneba	Dec 2020 – Dec 2022
Subject Lead/Facilitator, Institute for Teacher Education and Continuing Professional Development (ITECPD) for ICT Specialization courses for selected Colleges of Education.	June 2020 – Present
Faculty of Science Retreat Planning Committee	June 2020 – Present
Representing Member, Committee for Splitting of Faculty of Science Education into 3 separate faculties namely (Faculty of Natural Sciences Education, Faculty of Mathematical Sciences and Computing Education, Faculty of Applied Sciences Education)	Jul 2020 – Oct 2020
Secretary, Development of B.Sc. WASH programme for Faculty of Science Education, UEW	May 2020 – Aug 2020
Planning Committee Member – Faculty of Science Week Celebration	Mar 2020 – to date
Chief Patron – Information and Communication Technology Education Students Society (INFOCTESS)	Sept 2016 – May 2018:
Member, UEW Team for ODeLPD Online Training Program	Feb 2016 – Dec 2017
Resource Person – TechTalk Radio Show on Radio Windy Bay for Dept. of ICT Educ, UEW	Aug 2016 – Present

Honourary Coach (Basketball – Women)	Aug 2015 – Present
Member, Website Restructuring Team – Garden City University College	Jan 2010 – May 2010
Basketball Coach – Garden City University College	Sep 2009 – Dec 2010

EDUCATION AND CREDENTIALS

Doctor of Philosophy in Mathematics, Science and Technology Education (Computing Education)

University of South Africa

Duration: Ongoing: (2015 – to date)

Post Graduate Diploma in Teaching and Learning in Higher Education

University of Education, Winneba

Duration: One (1) year: (2011 – 2012)

Master of Technology in Information Technology – 1st Class Division

SRM University, Chennai, India

Duration: Two (2) years: (2007 – 2009)

Thesis: Analysis of Trade-off between Hidden Nodes and Exposed Nodes in 802.11 Networks

Bachelor of Science (Hons.) Computer Science – 2nd Class Upper Division

All Nations University College, Koforidua, Ghana

Duration: Four (4) years – (2003 – 2006)

Project: Financial Accounting Software for All Nations University College

S.S.S.C.E Certificate - General Science

Adisadel College, Cape Coast, Ghana

PUBLICATIONS, PROJECTS & SEMINARS

Peer Review Journal Publications:

1. Ghansah, B., Benuwa, B., **Essel, D. D.**, Sarkodie, A. P., & Agbeko, M. (2022). A Review of Non-Linear Kalman Filtering for Target Tracking. *International Journal of Data Analytics (IJDA)*, 3(1), 1-25. <http://doi.org/10.4018/IJDA.294864>
2. Oppong, S. O., Ghansah, B., Baidoo, E., Apeanti, W. O., & **Essel, D. D.** (2022). Experimental Study of Swarm Migration Algorithms on Stochastic and Global Optimisation Problem. *International*

Journal of Distributed Artificial Intelligence (IJDAI), 14(1), 1-26.
<http://doi.org/10.4018/IJDAI.296389>

3. **Essel, D. D.**, Ghansah, B., Benuwa, B., & Achulo S., (in press). Video Semantic Analysis based Locality-Sensitive Discriminative Sparse Representation with Weighted KNN Classification
4. Apeanti, W. O., & **Essel, D. D.**, (2021). Learning Computer Programming Using Project-Based Collaborative Learning: Students' Experiences, Challenges, and Outcomes. *International Journal for Innovation Education and Research (IJIER)*, 9(8), 191–207.
<https://doi.org/10.31686/ijier.vol9.iss8.3278>
5. **Essel, D. D.**, Benuwa, B., & Ghansah, B. (2021). Video Semantic Analysis: The Sparsity Based Locality-Sensitive Discriminative Dictionary Learning Factor. *International Journal of Computer Vision and Image Processing (IJCVIP)*, 11(2), 1-21. doi:4018/IJCVIP.2021040101
6. **Essel, D. D.**, & Wilson, O. A. (2017). Factors Affecting University Students' Use of Moodle: An Empirical Study Based on TAM. *International Journal of Information and Communication Technology Education (IJICTE)*, 13(1), 14-26. doi:10.4018/IJICTE.2017010102.
7. Kankam, G, Pajibo, E., & **Essel, D. D.** (2015). Counsellor Trainees' Perceptions and Attitudes to the Application of Information Communication Technology. *Journal of Science Education and Research (JOSER)*, 1(2), 96-108.
8. **Essel, D. D.**, & Wilson, O. A. (2014). Students' Use of Social Media in Higher Education in Ghana. *Asian Journal of Current Engineering and Maths*, [S.I.], 3(1), 271-278. ISSN 2277-4920.

Refereed Conference Proceedings/Articles

1. **Essel D. D.**, Apeanti, W. O., & Essel, C. H. (2022). E-Learning During the COVID-19 Pandemic: Students' Experiences and Challenges in Higher Education. *STEM Educators and Researchers in Africa (STEM-ERA)*. July 27-29, 2022.
2. Dake, D. K., **Essel, D. D.**, & Agbodaze, J. E. (2021). Using Machine Learning to Predict Students' Academic Performance During Covid-19, *Proceedings of the International Conference on Computing, Computational Modelling and Applications (ICCMA)*, 2021, pp. 9-15, IEEE Xplore. doi: 10.1109/ICCMA53594.2021.00010.
3. Students' Use of Social Media in Higher Education in Ghana at the 1st Annual International Conference on Advances in Computing. 27th November 2013, Accra, Ghana

Chapters in Books:

1. Apeanti, W. O., & **Essel, D. D.** (2015). Chapter One. In Apeanti, W. O., & **Essel, D. D.** (Eds.), *Introduction to Computers* (pp. 1-17). Fresh Publications. Kumasi, Ghana.
2. **Essel, D. D.**, & Apeanti, W. O. (2015). Chapter Two. In Apeanti, W. O., & **Essel, D. D.** (Eds.), *Computer Hardware* (pp. 18-45). Fresh Publications. Kumasi, Ghana.
3. **Essel, D. D.**, & Kwaa-Aidoo, E. K, (2015). Chapter Three. In Apeanti, W. O., & **Essel, D. D.** (Eds.), *Computer Software* (pp. 46-59). Fresh Publications. Kumasi, Ghana.
4. **Essel, D. D.**, & Wilson, K. B, (2015). Chapter Five. In Apeanti, W. O., & **Essel, D. D.** (Eds.), *Spreadsheets* (pp. 122-191). Fresh Publications. Kumasi, Ghana.

Book Publications:

1. **Essel, D. D.**, Pratt-Koomson, E., (2021). *Microsoft Applications*. UEW Printing Press. Winneba, Ghana (in press)
2. Apawu, J. & **Essel, D. D.**, (2017). *Fundamentals of Computer Programming*. UEW Printing Press. Winneba, Ghana
3. **Essel, D. D.**, (2015). *Easy to Master: Distance Education and Online Learning – An Introduction*. Fresh Publications. Kumasi, Ghana.
4. Asiedu, W., & **Essel, D. D.**, (2015). *Introduction to C++ Programming*. Fresh Publications. Kumasi, Ghana.
5. **Essel, D. D.**, & Asiedu, W., (2015). *Easy to Master: Object Oriented Programming Using Java*. Fresh Publications. Kumasi, Ghana.

Publications Submitted to Publishers:

1. **Essel, D. D.**, Ghansah, B., Benuwa, B., & Achulo S., (in press). Video Semantic Analysis based Locality-Sensitive Discriminative Sparse Representation with Weighted KNN Classification. (*Journal of Computer and Communications*) – Accepted for Publication

Research Publications in Progress:

1. Learning Programming with a Mobile App - An Application of the UTAUT Model

2. Using Machine Learning to Predict Students Performance in Introductory Programming Courses in the University of Education, Winneba
3. M-Learning with WhatsApp: Undergraduate Students Experiences, Attitudes and Challenges.
4. Usage patterns of mobile security features among undergraduate technology students
5. Mobile Phone Security Awareness and Attitudes
6. Effect of ICT Skills, Entrepreneurial Knowledge and Demographics on Students Technopreneurial Intentions: A Case of ICT Students in UEW
7. Evaluating Entrepreneurial Intention of ICT Students using Theory of Planned Behaviour

Seminars, Presentations and Workshops Attended

1. 17th – 19th January 2023 – Inter-University Conference for Doctoral Studies Seminar in collaboration with School of Graduate Studies, UEW. Presented on Application of Microsoft Teams, Information Retrieval and Plagiarism
2. 23rd – 26th June 2022 – New Programmes Development Retreat for Department of ICT Education, Winneba at the Elmina Beach Resort, Elmina, Central Region - Ghana. Part of the team that developed Ph.D. Computer Science programme
3. 26th – 28th August 2021 – Faculty of Science Education Retreat at the Elmina Beach Resort, Elmina, Central Region - Ghana.
4. 27th – 28th July 2021 – The Article Publishing Process, Organized by Elsevier Africa. Presentations by Lucia Schoombee and Daneshree Moodley
5. 4th – 5th January 2021 – Trainer/Facilitator – MOODLE LMS Orientation Workshop for UEW Teaching Staff: Using MOODLE to facilitate teaching and learning during COVID-19
6. 29th November – 1st December 2019 - New Programmes Development Retreat for Department of ICT Education, Winneba at the Manna Heights Hotel, Mankessim, Central Region – Ghana. Part of a team that developed B.Sc. Software Engineering programme
7. 5th November 2019 – Professional Development Conference, Organized by University of Education, Winneba

8. 25th April 2019 - Gender-Inclusivity Software Engineering (Webinar). Organized by ACM SIGSOFT. Presentation by Margaret Burnett, Distinguished Professor at Oregon State University and Anita Sarma, Associate Professor at Oregon State University.
9. 3rd April 2019 - The Future of Wireless and What It Will Enable (Webinar). Organized by ACM SigSoft. Presentation by Andrea Goldsmith, Stephen Harris Professor in the School of Engineering at Stanford University.
10. 22nd March 2019 - Artificial Intelligence Enabled Decision Support (Webinar). Organized by ACM SIGAI. Presentation by Martin Hofmann and Katherine Guo, research scientists at Lockheed Martin Advanced Technology Laboratories.
11. 6th March 2019 - What Role for Programmers in the Age of AI? (Webinar). Organized by ACM SIGSOFT. Presentation by Tim Menzies, Computer Science Professor at North Carolina State University
12. 21st February 2019 - Intelligent Software Engineering: Synergy between AI and Software Engineering (Webinar). Organized by ACM SIGSOFT. Presentation by Tao Xie, Professor and Willett Faculty Scholar in the Department of Computer Science at the University of Illinois at Urbana-Champaign, USA.
13. 20th December 2018 - 50 Years of Software Engineering, So Now What? (Webinar). Organized by ACM SIGSOFT. Presentation by Ivar Jacobson, Founder and Chairman of Ivar Jacobson International
14. 4th December 2018 - Break Into AI: A Q&A with Andrew Ng on Building a Career in Machine Learning (Webinar). Organized by ACM SIGSOFT. Presentation by Andrew Ng, General Partner at AI Fund and CEO of Landing AI
15. 15th November 2018 - Concurrent Object-Oriented Programming (Webinar). Organized by ACM SIGSOFT. Presentation by ACM Fellow and Software System Award Recipient Bertrand Meyer, CTO of Eiffel Software and Professor at Politecnico di Milano and Innopolis University.

16. 23rd – 27th October 2017 – National Cyber Security Week, 2017. Accra International Conference Centre
17. 15th - 19th Feb. 2016 – Oracle Academy Training on Database Design and SQL Programming at University of Ghana, Legon
18. 28th Oct – 22nd Nov 2014 – Participated in Innovation Month 2014 on the theme “Innovation for Jobs, Productivity and Growth” at the Ghana-India KACE in ICT. Demonstrated a programmable humanoid robot used for colour separated tasks.
19. 29th October 2014 – Presented “Expanding Access to Higher Education in Ghana” proposal at Faculty of Science Education Seminar
20. 27th November 2013 - 1st Annual International Conference on Advances in Computing, VVU, Accra. Presented paper titled Students’ Use of Social Media in Higher Education in Ghana
21. 18th – 19th June 2013 – The Totally Technical Online Conference for Mobile Developers by CodeRage Mobile (Webinar)
22. 12th – 14th Dec. 2012 – Workshop on Open Educational Resources by African Virtual University, Kenya. Organized by University of Education, Winneba.
23. 1st Nov. 2012 – Securing Electronic Students Information Systems by Dr. Ephrem Kwaa-Aidoo
24. 25th Oct. 2012 – Use of Animation to Enhance Science Education by Kofi Bentum Wilson
25. 4th Oct. 2012 – Contextual Conditions for the use of Course Management Systems: Survey of Private and Public Universities by Wilson Osafo Apeanti
26. 27th Jan – 5th Feb. 2012 – PHEA/ETI Training Workshop on MOODLE in Kumasi.

Software Applications Developed:

- Developed with a team, the following software applications:
 1. Certificate e-Repository – University of Education, Winneba
 2. Students’ Clearance System – University of Education, Winneba
 3. Students’ Academic Record Management Systems – University of Education, Winneba

4. Online Voting System for general use
 5. e-Voting System for INFOCTESS and GNATOC – University of Education, Winneba
 6. Hall Management System (Accommodate) – University of Education, Winneba
 7. Hospital Management Software – UEW Clinic
 8. Staff & Student Appraisal Management System – University of Education, Winneba (Quality Assurance Directorate)
- Supervised the development, testing, implementation and training for the following software applications
 1. UEW Library Orientation App - University of Education, Winneba
 2. Plagiarism Checker (Anti-Copy Software) – Department of ICT Education, UEW, Winneba
 3. Church Management Software – ICGC, Winneba
 4. Stores Computerization Software – Cocoa Research Institute of Ghana (Tafo)
 5. Guest House Computerization Project – Cocoa Research Institute of Ghana (Tafo)

Software Projects under Development:

1. School Management System for pre-tertiary schools – General Use
2. Church Management Software – Ebenezer Methodist Cathedral, Ghana Winneba
3. Staff Promotion Management System - University of Education, Winneba
4. Biometric Attendance System for University of Education, Winneba

Future Software Projects

1. Intelligent Queue Management Software – General Use

Special Honours and Positions

University of Education, Winneba

Coordinator for General ICT Courses	Aug 2016 – Present
Course Coordinator for ICT Education (Distance Education)	Sept 2015 – July 2017
Honourary Coach (Basketball – Women)	Aug 2015 – Present
Academic Counselor for Level 200 ICT Education Students	Aug 2012 – Present
Courseware Developer for Moodle	Nov 2011 – Present

Garden City University College, Kumasi - Ghana

University Basketball Coach	Sep 2009 – Dec 2010
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SRM University, Chennai - India

University Basketball Team Captain

Nov 2008 – May 2009

All Nations University College, Koforidua - Ghana

Students' Representative Council Entertainment Chairman

Feb 2005 – May 2006

Students' Representative Council Entertainment Committee Asst. Organizer

Nov 2003 – Feb 2005

PERSONAL DETAILS

Date of Birth: 9th October, 1984

Nationality: Ghanaian

Marital Status: Married

Children: One (1)

REFERENCES

1. Mrs. Elizabeth Sika (Personal Reference)
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Phone: +233 244 866 237
2. Prof. Issifu Yidana (Academic Reference)
University of Education, Winneba
Phone: +233 245 035 900
Email: iyidana@uew.edu.gh
3. Dr. Ephrem Kwaa-Aidoo (Professional Reference)
University of Education, Winneba
Phone: +233 206 724 609
Email: kwaaidoo@yahoo.co.uk