



African Biomedical Engineering Consortium

Innovation through Education

ABEC Design Competition 2019 – First Stage results

N°	Title	University	Country	Project Leader	Result
1	Designing a Low Cost Nuchal Cord Detector with Fetal Heartrate Monitor	Malawi University of Science and Technology	Malawi	Mwayi Yelewa	Eligible
2	Design of a Low-Cost Monitoring Machine	Malawi University of Science and Technology	Malawi	Ananias Cyrus Zulu	Eligible
3	Automated Medical Aspirator	Malawi University of Science and Technology	Malawi	Kingsley Gwesere	Eligible
4	iSeeU - A Pain Monitoring System	University of Porto	Portugal	Cristiana Carpinteiro	Eligible
5	Standing framework for kids aimed at rehabilitation after surgery	Universidad Politecnica de Madrid	Spain	Adrián Martínez	Eligible
6	Portable Ultrasound System for Image-Aided Anesthesiology	Universidad Politecnica de Madrid	Spain	Carlos Aguilar Vega	Eligible
7	Integrated System Of Preventive Mask With Monitoring Watch	Jimma University	Ethiopia	Yehualashet Adise	Eligible
8	Automatic Anesthesia Controller (AAC) injection system using Heart Beat Sensor	Technical University of Mombasa	Kenya	Jim Gitonga	Eligible
9	3D Printed Laryngoscope and Surgical Instruments for Trachea Intubation	Universidad Politecnica de Madrid	Spain	Nuria Díez Navarro	Eligible
10	SALUTEM – Automating ISBAR Assessment in the Learning Environment	University of Porto	Portugal	Gabriel Lopes	Eligible
11	Spine Surgery Simulator	Universidad Politecnica de Madrid	Spain	Verónica Palomino Díaz	Eligible
12	Phototherapy Vest for Neonatal Jaundice	University of Warwick	United Kingdom	Mahir Taher	Eligible
13	A cost effective UVC Infection Control Device in Operation Theatre	Ernest Cook Ultrasound Research & Education Institute	Uganda	Milton Mcmoth Manano	Eligible
14	A Low-Cost Incinerator Powered Autoclave for Sterilization of Surgical Instruments in Low-Income Countries	Makerere University	Uganda	Nancy Bedayika	Eligible
15	Whole Blood Auto Transfusion	Makerere University	Uganda	Nyonyontono John Peter	Eligible
16	Design of Pre-eclampsia Detector Device	Malawi University of Science and Technology	Malawi	Jonathan Mhango	Eligible
17	Detection System of Surgical Sponges during Surgery	University of Pisa	Italy	Florinda Coro	Eligible
18	Digitalized postpartum hemorrhage management device	Jimma University	Ethiopia	Derartu Dereje	Eligible
19	Automatic and Portable Birth Stool for a Squatting Positions Birth	University of Pisa	Italy	G. Gnazzo	Eligible
20	Sleep Apnea and Pulse Rate Integrated Transport Infant Incubator	Addis Ababa University	Ethiopia	Henok Gebremedhin	Eligible
21	Design of Handheld Smart Device for Detecting Retained Surgical Items	University of Lagos	Nigeria	Charles Osuagwu	Eligible
22	Intrapartum ambulatory foetal monitor	Makerere University	Uganda	Stephen Tashobya	Eligible
23	Continuous Uterine Contraction and Corresponding Cervical Dilation Analyzer	Jimma University	Ethiopia	Lemlem Tiruneh	Eligible
24	Enhancement of Transplant Service Management System by Web Based Central Database Managing Waiting List and Organ Allocation	Addis Ababa University	Ethiopia	Chernet Mequanent	Eligible
25	Development of a surgical data management system to monitor volumes and outcomes of surgical	University of Cape Town	South Africa	Martin Kiwanuka	Eligible
26	NEO2: An Oxygen-Delivery Device for Individualized Care in Low Resource Settings	Columbia University	United States	Yiela Saperstein	Eligible
27	CORAX: life box to create a sterile environment for preventing children infections	University of Bologna	Italy	Caterina Giuliani	Eligible
28	Electrosurgery for the treatment of condylomas as cancer precursors in cases of HPV	Politecnico di Torino	Italy	Vito D'Orazio	Eligible
29	A Smart MedBox Cooler	University of Lagos	Nigeria	Wilfred Dieke	Eligible
30	Estimation of blood loss in women after birth using a re-usable calibrated drape with a sensor	Ernest Cook Ultrasound Research & Education Institute	Uganda	Phiona Nannungi	Eligible
31	A mobile device-based application to improve the outcomes of surgical procedures among patients requiring emergency blood transfusion in resource limited settings	University of Cape Town	South Africa	Emmanuel Kamuhire	Eligible
32	A PORTABLE FETAL BIOPHYSICAL PROFILE DEVICE	Ernest Cook Ultrasound Research & Education Institute	Uganda	SAUL MUGABI	Eligible
33	Feelsalama: An Emergency Kit for Surgery	University of Eldoret	Kenya	Benson Kagiri	Eligible
34	Smart Ante-natal Care Handbook	Kenyatta University	Kenya	Lewis Kamindu	Eligible
35	SUCTION FLUID OVER-FLOW ALERT SYSTEM	Polytechnic Malawi	Malawi	RODRICK CUSTOM	Eligible
36	Surgical separator for field hospitals using a 3D printer.	Universidad Politecnica de Madrid	Spain	Sonia Martín Mozas	Eligible
37	MKeeper – Global Technology Innovation in Obstetrics	University of Lisbon	Portugal	Ana Catarina Lourenço	Eligible

38	A NONINVASIVE ACUTE BLOOD LOSS DETECTION DEVICE	University of Cape Town	South Africa	Adam Chileshe	Eligible
39	Livix – Global Technology Innovation in Surgery	University of Lisbon	Portugal	Ana Catarina Lourenço	Eligible
40	Varicose Veins Prevention Device for Pregnant Women	Kenyatta University	Kenya	Susan Gitau	Eligible
41	A Mobile Communication Aid To Reduce Obstetric Surgery Delay In Developing Countries	Mbarara University of Science and Technology	Uganda	Collins Amanyire	Eligible
42	Wearable Device Based Fetal and Maternal Heart Rate Monitoring System	Mbarara University of Science and Technology	Uganda	Matiwos Tekalign	Eligible
43	Improvement on heart valves	Mbarara University of Science and Technology	Uganda	BONNY MATSIKO	Eligible
44	Design of an autonomous system of air and surface disinfection of the operating theater	Université des Montagnes	Cameroon	Djemi Ngoupeyou Yvan	Eligible
45	Design of simple and cost effective cervical ripening device	Malawi University of Science and Technology	Malawi	Stella Mpunga	Eligible
46	OBSTETRIC DIGITAL VACUUM EXTRACTOR	University of Pisa	Italy	Mafalda Rosa	Eligible
47	Designing a probe sensor system for monitoring of the cervical dilation of a pregnant woman	Malawi University of Science and Technology	Malawi	Peter Amos Lettas	Eligible
48	AN AUTOMATIC ANAESTHESIA INJECTOR SYSTEM	Technical University of Mombasa	Kenya	Gilbert Chesoi	Eligible
49	Life Recharging	Politecnico di Torino	Italy	Elisa Bendanti	Eligible
50	Obstetric Fistula -Fiskik	Makerere University	Uganda	Lynette Kicoonco Mutungi	Eligible
51	Ground Reaction Force Based Active Ankle Foot Orthotic	Addis Ababa University	Ethiopia	Tewbesta Getachew	Eligible
52	MESSAGE BELT TO AID IN POST-PARTUM HAEMORRHAGE MANAGEMENT	Kenyatta University	Kenya	Bonface Karanja	Eligible
53	Automated Anesthesia Delivery System	Jimma University	Ethiopia	Mihiret Yilma	Eligible
54	SURGICAL BOOKING INFORMATION SYSTEM	Polytechnic Malawi	Malawi	BRIAN A.C. NYIRENDA	Not eligible
55	DESIGN OF A FORCEP WITH AN EMBEDDED 3D CAMERA SYSTEM TO ASSIST IN VAGINAL DELIVERY.	Mbarara University of Science and Technology	Uganda	Immaculate Asherure	Not eligible
56	HEARTBEAT SENSING AND HEART ATTACK DETECTION TELEMETRICALLY	Technical University of Mombasa	Kenya	OGWECHÉ OMWOYO JARED	Not eligible
57	AUTOMATIC HAEMODIALYSIS RESET	Technical University of Mombasa	Kenya	Edwin Opiyo	Not eligible
58	Robotic Arm for Minimally Invasive Surgical Procedures for Low Resource Settings	Technical University of Mombasa	Kenya	Arafat Mukasa	Not eligible
59	Design of A Smart Wearable Bag for Patients Suffering from Obstetric Fistula in Low Resource Counties	Mbarara University of Science and Technology	Uganda	Immaculate Asherure	Not eligible
60	Surgical Safety Tracking System	Malawi University of Science and Technology	Malawi	Isaac S. Chisembe	Not eligible
61	Low-Cost Wearable for Remote Monitoring of Fetus and Maternal Health	Addis Ababa University	Ethiopia	Bereket Tesfaye	Not eligible
62	AFFORDABLE, SIMPLE AND SOLAR POWERED PHOTOTHERAPY UNIT FOR JAUNDICE TREATMENT IN NEWBORNS	Ernest Cook Ultrasound Research & Education Institute	Uganda	ENOKA ECUKA	Not eligible
63	The NurseBot	Makerere University	Uganda	Patrick Sseremba	Not eligible
64	HIGH COSTS FOR NEONATAL RESPIRATORY DISTRESS SYNDROME TREATMENT USING CPAPS IN LOW RESOURCE COUNTRIES.	Kenyatta University	Kenya	Ngabo Joel	Not eligible
65	Low cost patient warmer for operation rooms of low clinical resource countries	Jimma University	Ethiopia	Rediet Yohannes	Not eligible
66	PonaApp – Safe Recovery At Home	Muhimbili University of Health and Allied Sciences	Tanzania	Frank E.Arab	Not eligible
67	Wearable Fetus Monitoring Device	Addis Ababa University	Ethiopia	Misganaw Addis	Not eligible
68	ARTIFICIAL INTELLIGENCE APP TO SOLVE POSTPARTUM HAEMORRHAGE	Kenyatta University	Kenya	LUKAS NYONGESA	Not eligible
69	DESIGNING AN IMPROVED BI-LEAFLET HEART VALVE	Mbarara University of Science and Technology	Uganda	AKIROR PEACE	Not eligible
70	HYSTERECTOMY	Mbarara University of Science and Technology	Uganda	KHALID ALEMA	Not eligible
71	IcareMonitor	Polytechnic Malawi	Malawi	Mathews Mchenula	Not eligible
72	DESIGNING A MEDICAL EQUIPMENT DATABASE MANAGEMENT SYSTEM	Ernest Cook Ultrasound Research & Education Institute	Uganda	Kemigisha Priscilla	Not eligible