Tanzania

Here’s a brief synopsis of Ordinary Diploma and Bachelors programs at Arusha Technical College, Arusha, Tanzania, and Dar es Salaam Institute of Technology (DIT):

Arusha Tech’s first-of-a-kind (in East Africa) Bachelors degree in “Electrical and Biomedical Engineering” will have first grads in January (about 20). Three are on academic staff at Arusha Tech. One is on the academic staff at DIT, and plans to help start a Bachelors degree program there, currently seeking my input.

Current enrollment in Biomedical Engineering programs at Arusha Tech is over 230 in O.D. and Bachelors program.

Total Arusha Tech Diploma graduates should reach 150 in January (over 105 currently from classes of 2015, 2016, 2017, and 2018). Unsure of DIT total, but their program was grossly inferior until recently, as noted by MoH. I met with DIT HoD in March 2018 to improve curriculum, particularly student medical device projects as required at Arusha Tech, and one of our BEng grads is on their academic staff, which should help.

“Engage Cornell” two-year grant has implemented faculty/student exchange program with Cornell University, managed by Dr. Chris Schaffer and facilitated by Menansili Mejooli, Arusha Tech faculty member who is nearing his PhD defense at Cornell (Menansili was sponsored by BETA for 2012 Summer Institute in Usa River, Tanzania, by Duke University and Engineering World Health). BETA sponsored 6 more Arusha Tech faculty for Summer Institutes 2014, 2015, 2016. Several participants have since received Biomedical Engineering degrees, two MEng and one BEng. 2016 SI grad Ally Ngulugulu (MEng BME) is currently acting HoD for Electrical Engineering and Biomedical at Arusha Tech, and currently at Cornell until Oct. 15.

Clemson University has a similar faculty/student exchange agreement, and several Arusha Tech faculty are pursuing PhD’s at Clemson. BETA’s VP Hobey Tam was first Clemson faculty volunteer per connection by Dr. Delphine Dean (Clemson BME HoD). Clemson’s Dean visited Arusha Tech for partnership discussions in 2019. Rice University has student exchange at DIT.

In Jan 2019, BETA provided Arusha Tech with BC Group professional calibration devices for NIBP, SPO2, ElectroSurgical Units, diagnostic ECG, Defibrillators/AEDs, and X-Ray Calibration (Keithley TRIAD). BETA also facilitated donation of an operational AMX4 X-Ray machine from Arusha Lutheran Medical Center, for X-Ray calibration. Arusha Tech is arguably better-equipped for calibration than Tanzanian MoH.

In January 2020, BETA VP Hobey Tam, his business partner, and I will conduct BETA’s first Biomed seminar directed toward Biomed alumni and working BME professionals. One week
covers Biomedical Device field calibration (using aforementioned cal equipment), another week covers medical device design process/approval/tracking (by Hobey and his business partner, who run a BME SW product company).

I expect Cornell and Clemson to provide BME academic curriculum support to Arusha Tech for Clinical Engineering, while BETA transitions to the role we play in Haiti, with BME Continuing Education and support of working professionals. Among our top Arusha Tech Diploma graduates, one is being sent to Siemens in Europe for advanced training in MRI and Cath Lab equipment maintenance. While he was due to enter Arusha Tech’s Bachelors program this year as a BETA Scholar (full scholarship), his private employer offered him a salary commensurate with a Sr. Lecturer at Arusha Tech (MEng). We feel this type of commercial training is invaluable, and so I counseled him to take the offer and hold off on Bachelors for a couple years.

Hope this helps. I can send a few pics from student/faculty calibration sessions at Arusha Lutheran Medical Center if you like. We still need more contemporary medical devices for training at Arusha Tech. We have 2 Zoll ER Defibs, 5 LTV950 transport vents, 6 Welch-Allyn and CASMED Vital Signs Monitors, 4 GE MAC5500 diagnostic ECG’s, suction, AMX4 X-Ray, glucometers – so a good start. We could use working anesthesia machines, incubators/infant warmers, oxygen concentrators (we have O2 ultrasonic calibration device). Academic partners (Cornell, Clemson) are unlikely to provide much-needed medical devices, as their focus is theory and design. The best news is that most of our graduates are getting hired through MoH, and better ones by private industry.

Best Regards,

Dan Schuster
Executive Director and Founder

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