



## TERMS OF REFERENCE: Applied Computing Science Material Development Coordinators

### 1. INTRODUCTION

#### AVU

The African Virtual University (AVU) [www.avu.org](http://www.avu.org) is a Pan African Intergovernmental Organization established by charter with the mandate of significantly increasing access to quality higher education and training through the innovative use of information communication technologies. A Charter, establishing the AVU as an Intergovernmental Organization, has been signed so far by nineteen (19) African Governments - Kenya, Senegal, Mauritania, Mali, Cote d'Ivoire, Tanzania, Mozambique, Democratic Republic of Congo, Benin, Ghana, Republic of Guinea, Burkina Faso, Niger, South Sudan, Sudan, The Gambia, Guinea-Bissau, Ethiopia and Cape Verde. The AVU has its headquarters in Nairobi, Kenya and a Regional office in Dakar Senegal with Host-Country Agreements and Diplomatic Status with the two governments.

The AVU Business Plan 2009-2014 has two main thrusts: (a) Educational and support services provided on a fee basis; and (b) Not-for-profit development services. The Not-for-profit development services aims at building the capacity of AVU Partner Institutions (PIs) with an objective of increasing access to quality education through the following activities: updating and developing content; Open Educational Resources (OER) Development; AVU Capacity Enhancement Program (ACEP); set up/upgrade ODeL centers; developing professional networks through Communities of Practices; Research and Development; and Quality Evaluation and Benchmarking.

Some of the not-for-profit development services were delivered from 2005 to 2011 through the AVU Multinational Project I, funded by the African Development Bank (AfDB) and implemented in 10 African countries with 12 participating institutions.

#### **BACKGROUND to the Applied Computer Science Program**

In May 2013, faculty and administrative representatives of the 18 Universities involved in the ACSP project met to propose a comprehensive curriculum. The group first discussed the skills, knowledge and job expectations of graduates of both the two-year diploma and four-year degree graduates. Some universities also noted they would be also willing to use the curriculum for one-year certificates programs. The Curriculum was also appropriated for the Licence, (3 years) Maitrise, (2 years) and Doctorate (2 years) (LMD) format followed by universities in Francophone and Lusophone countries having an extra year of secondary education.

This exercise resulted in a curriculum of a total of 54 modules of technical computer science courses, non-technical general education components (math, communications etcetera) and guidelines for practical project and for internships. Having a consensus on the curriculum is important for being able to share the modules among the participating institutions, and for enabling accreditation and promoting student mobility. All modules will eventually be released as Open Education Resources.

The proposed curricula will be mapped to the internationally agreed upon benchmark, the IEEE/ACM computer science curriculum for purposes of a) ensuring the courses conform to best practices for curriculum in computer science, and b) to organize the courses into vertically integrated clusters or "Streams" that can be

assigned to the coordinators who will supervise the teams of subject-matter experts (SMEs) writing the course modules.

To develop program, the AVU invited the eighteen (18) participating institutions to nominate subject matter experts (SMEs) in the various disciplines to take part in the process. These SMEs require overall coordination by top-notch discipline experts in the various groups to effectively develop and review the content of the new curriculum in English, French and Portuguese. This document specifies the terms of reference for these coordinators.

## **2. MAIN ACTIVITIES FOR ACSP SMEs COORDINATOR:**

1. Orientation Workshop – Attend an online or face-to-face orientation to learn about guidelines for authoring, the systems AVU is using for course development, and to be equipped with the information and tools necessary for the exercise
2. Help facilitate the Authoring Workshop for the Subject Matter Experts (SMEs). (This workshop is to be held immediately after the orientation.)
3. Assist in coordinating the assignment of SMEs as authors and reviewers of each module in their area of expertise and across the three functional languages of the AVU.
4. Work with the team for each module to come to a consensus of any required changes, clarifications or updates to the module learning outcomes since the May 2013 ACSP Curriculum Workshop.
5. Support the SMEs in following the guidelines for authors and reviewers, and in using the Google Drive production system.
6. Supervise and track the progress of materials and advice authors and AVU when each unit is ready for review.
7. Proofread the final reviewed module (if in own language) before signaling its readiness for dissemination by going over the checklist provided.
8. Following a Quality of Service Guidelines and act as a general liaison between the AVU and the SMEs writing and reviewing materials.
9. Recommend payment of the SMEs upon completion of their writing or reviewing tasks.

## **3. CRITERIA FOR THE SELECTION OF ACSP COORDINATORS**

### **Essentials**

- Experience in the design, delivery and evaluation of online education programs at the university level.
- At least a first degree (Bachelors) in Computer Science or a related discipline. Preference will be given to candidates with a Masters or Doctorate. One stream is available for a coordinator with Communications/ e-Entrepreneurship as a background.
- Fluency in spoken and written English language. Preference will be given to candidates with additional working knowledge of French or Portuguese
- High level of computer literacy (e.g. fully conversant with MS office, some ability to use graphics software, html authoring) and a willingness to expand knowledge and skills to new areas of computer literacy (e.g. multimedia authoring software)
- Other Skills :
  - \* Creativity
  - \* Analytical skills
  - \* Organization / team work
  - \* Communication skills

### **Highly desirable**

- Experience in ODeL materials development

- Skills in instructional design (preferably for open and distance education programs and ideally for online programs)
- Experience in the design and validation of formative and summative assessments
- Knowledge/awareness of gender issues associated with encouraging the participation of women in education
- Previous experience involving international development or higher education In Africa.

**Desirable**

- Technical skills in using Word, Skype and Google Drive.

**4. SPECIFIC DELIVERABLES**

- Sign-off on newly authored Applied Computer Science modules in three languages
- Effectively facilitated team work for the ACSP SMEs
- Participation in scheduled meetings with AVU’s Instructional Designer
- Facilitation of Workshop I for the ACSP SME Team
- Community of Practice moderation
- Coordination of the Peer Reviewers work for the ACSP modules
- Adhere to the ***Quality of Service*** guidelines as outlined in **Annex 2**

**5. REMUNERATION**

Remuneration will be \$400 per revised final module with the following payment schedule:

- i.) \$50 of the total value of all modules assigned after initial coordination and active engagement of all the SMEs assigned;
- ii.) \$350 of total value of all modules coordinated after submission of draft modules reviewed; and
- iii.) \$100 per module bonus for timely delivery as per schedule outlined in **Annex 1**.

## Annex 1: IMPLEMENTATION SCHEDULE

ACTIVITIES	DETAILS	SUGGESTED DATES	
		START BY	DUE DATE
Launching Workshop for coordinators	<ul style="list-style-type: none"> <li>▪ Online session facilitated by AVU’s Instructional Designer and Project Manager to introduce Coordinators to the TE module revision process</li> </ul>	Aug 25 <sup>th</sup> 2014	Aug 26 <sup>th</sup> 2014
Workshop – Coordinators and SMEs	<ul style="list-style-type: none"> <li>▪ Orientation meeting between Coordinators and Subject Matter Experts:               <ul style="list-style-type: none"> <li>* Introduction to the process</li> <li>* Expectations and revision process workflow</li> <li>* Distribution of toolkit for the revision process</li> <li>* Training in Google Drive basics</li> <li>* Learning about module authoring guidelines</li> <li>* Discussing pedagogical practices adapted to the applied nature of the program</li> <li>* Development of a Community of Practice</li> </ul> </li> </ul>	Aug 27 <sup>th</sup> 2014	Aug 29 <sup>th</sup> 2014
Authoring – Phase A	<ul style="list-style-type: none"> <li>▪ First module development phase – Junior (1<sup>st</sup> &amp; 2<sup>nd</sup> year) Courses</li> </ul>	1 Sept 2014	01 November 25 2014*
Review -	<ul style="list-style-type: none"> <li>▪ Online meeting between Coordinators and Subject Matter Experts:               <ol style="list-style-type: none"> <li>i. Review program/lessons learnt</li> <li>ii. Evaluation of the process</li> </ol> </li> </ul>	01 November 2014	01 December 2014
Module translation into Portuguese (1 <sup>st</sup> batch - Phase A)	<ul style="list-style-type: none"> <li>▪ Coordinator review and sign-off of completed modules.</li> </ul>	01 December 2014	15 December 2014
Authoring – Phase B	<ul style="list-style-type: none"> <li>▪ Second module development phase – Senior (3<sup>rd</sup> &amp; 4th year) Courses</li> </ul>	1 January 2015	01 MArch25 2015
Review -	<ul style="list-style-type: none"> <li>▪ Online meeting between Coordinators and Subject Matter Experts:               <ol style="list-style-type: none"> <li>iii. Review program/lessons learnt</li> <li>iv. Evaluation of the process</li> </ol> </li> </ul>	01 April 2015	01 May 2015
Module translation into Portuguese (1 <sup>st</sup> batch - Phase A)	<ul style="list-style-type: none"> <li>▪ Coordinator review and sign-off of completed modules.</li> </ul>	01 May 2015	01 June 2015
Video production - Phase C	As required and deemed essential, select junior course will be selected for additional development of supporting video vignettes.	TBA	TBA

## Annex 2: **QUALITY OF SERVICE FOR COORDINATORS, AUTHORS AND REVIEWERS**

The development of instructional modules requires consistent and reliable coordination of activities among the Coordinators, Authors and Reviewers involved in the process. The key role of the Coordinators is to help guide the authors and reviewers and to guide through the development process so we end up with modules that are content accurate, free of copyright, and delivered on time. Communications are key during the initiation of development when Authors and Reviewers may have more questions and are more easily blocked by a lack of response to even simple queries. Similarly, the AVU needs to schedule resources to receive and process the incoming instructional material, and therefore ongoing communication and reporting during the development process is important. Finally the peer reviewers have an important job to ensure that the materials written are of academic quality and accuracy and conform to the templates needed for follow-on production and are free of any copyright issues. The goal of this document is to specify the quality of service expected of participants in the project.

1. Frequency of communication. Each Coordinator must at a minimum communicate with the Instructional Designer and each SME author/ reviewer on a **weekly** basis. We suggest keeping a communication log for each module and always placing the module code in the subject of any emails. E.g. Phys-01-PT
2. Response time for replying to emails is within **24 hours**.
3. Quality Assurance Checklists have been provided for both Authors and Peer Reviewers. Coordinators need to verify and sign off on these checklists as well. Please take time to review the work provided and discuss any issues with the authors and reviewers.
4. Link Logs – Each Author has been asked to create a reference list of any links they wish to include in the material. This list will help us verify the ongoing availability of the material at that point.
5. Images Log – Each Author has been asked to log any pictures, screen grabs, graphics or formulae they wish to include in the materials. This helps AVU ensure we have a clean and uniform look to the materials and that we avoid copyright issues.
6. Copyright – The goal of the project is to prepare materials that are free of copyright restrictions so they can be used freely by others. The coordinator needs to work with the authors in this regard and ensure that any third party materials included have a Creative Commons license CC-BY or CC-BY-SA.