Request for Offers 21/STIKK/2018
Software Engineering (C#)

1. Introduction

STIKK Education has been designed to specifically address the obstacles concerning skill-development and training. STIKK Education brings together all of the IT training opportunities already provided by STIKK, with a host of new IT programmes and initiatives. Its vision is to increase the local capabilities in the sector of ICT through professional and competent trainings, specifically designed to meet the needs of the local industry, while keeping on with international technology trends.

This will be the third period for STIKK Education, where we will accept 30 participants in a 7-month period 2018. Through the trainings, the young IT enthusiasts will gain specific skill-sets that are currently key on the local and European Union market by successfully mastering over curricula that are in full compliance with the European e-Competence Framework 3.0, which is an initiation of multi-stakeholders from the European ICT sector in order to identify and standardize skills that are currently needed in the market, and which has also been prioritized by the local ICT companies to implement.

Additionally, these 30 young IT enthusiasts will complete a 1-month product development phase and 3-months internship programme within 7-months period of time at STIKK member companies, which will help them put to practice the newly acquired skills and showcase their skills to potential employers.

2. Statement of Need

The purpose of this Request for Offers is to identify qualified training providers to provide trainings with 15 participants of the **Software Engineering** profile. These interested providers need to have the capacity to develop and deliver **150 hours** classroom trainings including materials, presentations, practical exercises, case studies and group discussions.

3. Modules

5 modules are as presented below:

- C# Development
- Application Design
- Testing
- Solution Deployment & Documentation Production
- Problem Management

4. Qualifications / Components

All Offers must include:

A. Company Background and Experience

Provide a brief history of your company/institution, with list of current trainings, certifications that you have received, and your experience and qualifications with training development services.

B. List of Trainers and their Experience

Provide a list of Trainers that will conduct the trainings, what modules they will be involved in, how their previous experiences are fitting to our training, certifications that they have received, or their CVs including all information as required above.

C. References

Please attach references including names, organisation, and contact information for at least three previous clients who can provide insights regarding skills, qualification and delivery of requested training services.

D. Detailed Methodology (max. 3 page)

Please provide an implementation plan, the timeline, number of hours, and participants' evaluation method (keeping in mind the attached Curriculum).

E. Financial Offer (max. 1 page)

In a separate document, please describe the prices per hour, per module, and Total, by showing the price with VAT.

5. Submission Guidelines

Interested Training Providers shall send their Offers together with all necessary documents until the **11th of July, 2018** (CoB) at STIKK offices, Rexhep Mala 28A, 10000 Prishtina.

The offers should be send in an envelope, consisting of two (2) separate envelopes (Technical Offer and Financial Offer).

6. Type of Contract

Economically most advantageous bid.

7. Complaints

Each bidder has the right to complain, which they can do at info@stikk.org within 7 calendric days after receiving the email regarding the selection outcome.

8. Payment Conditions

The schedule of payments is specified below:

Amount	Scheduled when:
30%	upon the contract signature;
40%	after mid-term evaluation;
30%	completion of the task.

9. Selection Criteria

Criteria	Points
Work Experience	
Company's experience *(minimum 3 years of experience in trainings)*	10
Trainer(s) experience *(minimum 3 years of experience in the same field)*	10
Company/Trainer certifications *(minimum 2 certifications)*	5
STIKK's previous experience with provider	5
References with contact details *(minimum 3 references)*	5
Methodology	
Detailed description on approach and methodology	30
Implementation plan and timeline	15
Number of course hours *(minimum 150 hours for the whole profile)*	15
Number of exams/tests *(minimum 5)*	5
Total:	**100**

10. List of Annexes

- Annex A — Terms of References (Software Engineering Curriculum)
- Annex B — Terms and Conditions for Trainers

Annex A – Terms of References

The purpose of this Terms of References (ToR) is to identify qualified training providers to provide trainings in **Software Engineering**.

Below you may find the course description, goals and objectives, and course schedule.

Software Engineering Curriculum

Venue:	Training Room
Implementation period:	01.08.2018 – 30.11.2018
E-mail:	trainings@stikk.org
Website:	www.stikk.education

COURSE DESCRIPTION

The Software Engineering Course will prepare students to perform in a position of junior software developer within a team in a software development company. The course will provide the knowledge and the skills at a practical level encompassing the following software development processes: Application Design, Application Development, Testing, Solution Deployment, and Documentation Production.

This course syllabus is to be used in conjunction with the Software Engineering profile developed by STIKK on the basis of the EU eCompetencies Framework.

This syllabus and the detailed course schedule in it are a best-practices examples only. The final course schedule will be designed by the instructor and it will be approved by the STIKK Education Advisory Committee.

COURSE PREREQUISITES

- Basic software and hardware knowledge;
- English language at reading level;
- Prior experience in any programming language is desirable but not mandatory.

COURSE GOALS AND OBJECTIVES

The course is designed to increase the students' level of knowledge and to provide them with skills to work on a wide range of software development projects. While the course will focus on general software development principles, specific existing programming languages and solution development environments will be used to demonstrate those principles and create working modules and solutions. The selection and use of such programming tools will be subject to guidance by the STIKK Education Advisory Committee which is comprised of representatives of local software development companies.

Upon completion of the course, the student will achieve the following objectives:

- Student has the skills to Analyse, specify, update and makes available a model to implement applications in accordance with IS policy and user/customer needs. Selects appropriate technical options for application design, optimising the balance between cost and quality. Designs data structures and builds system structure models according to analysis results through modelling languages. Ensures that all aspects take account of interoperability, usability and security. Identifies a common reference framework to validate the models with representative users, based upon development models (e.g. iterative approach).

- Interprets the application design to develop a suitable application in accordance with customer needs. Adapts existing solutions by e.g. porting an application to another operating system. Codes, debugs, tests and documents and communicates product development stages. Selects appropriate technical options for development such as reusing, improving or reconfiguration of existing components. Optimises efficiency, cost and quality. Validates results with user representatives, integrates and commissions the overall solution.

- Constructs and executes systematic test procedures for ICT systems or customer usability requirements to establish compliance with design specifications. Ensures that new or revised components or systems perform to expectation. Ensures meeting of internal, external, national and international standards; including health and safety, usability, performance, reliability or compatibility. Produces documents and reports to evidence certification requirements.

- Following predefined general standards of practice carries out planned necessary intervention to implement solution, including installing, upgrading or decommissioning. Configures hardware, software or network to ensure interoperability of system components and debugs any resultant faults or incompatibilities. Engages additional specialist resources if required, such as third party network providers. Formally hands over fully operational solution to user and completes documentation recording all relevant information, including equipment addressees, configuration and performance data.

- Produces documents describing products, services, components or applications to establish compliance with relevant documentation requirements. Selects appropriate style and media for presentation materials. Creates templates for document-management systems. Ensures that functions and features are documented in an appropriate way. Ensures that existing documents are valid and up to date.

Demonstrate mobile development knowledge by completing the following:

- Pass all the exams, including skills exams, and complete all assignments, homework and other written tasks.
- Complete an internship or work on a project in the roles that encompass all the main tasks from the five objectives above.

COURSE READINGS AND BOOKS
Recommended Readings

- Sedgewick, Robert; Wayne, Kevin. Algorithms (4th Edition)
  ISBN-13: 978-0321573513
- Lutz, Mark. Learning Python, 5th Edition
  ISBN-13:978-1449355739
- Codeschool. https://www.codeschool.com/courses/try-python Try Python Free Course.
- Crockford, Douglas. JavaScript: The Good Parts 1st Edition
  ISBN-13: 063-6920517740
- McConnell, Steve. Code Complete: A Practical Handbook of Software Construction, Second Edition 2nd Edition
  ISBN-13: 079-0145196705
- Shore, James; Warden, Shane. The Art of Agile Development 1st Edition
  ISBN-13: 063-6920527671
- Rubin, Kenneth S. Essential Scrum: A Practical Guide to the Most Popular Agile Process (Addison-Wesley Signature Series (Cohn)) 1st Edition
  ISBN-13: 007-6092046028

Materials

One notebook, with an option to add pages

COURSE SPECIFICS
Attendance

While lectures and class exercises will cover the general topics, class work on one side and reading material and homework on the other are meant to complement each other rather than repeat each other; thus, class attendance is critical. The assigned readings and homework must be completed before each class; otherwise students will be unable to take effective notes and to participate in the class work.

Dropping out from the course

It is the student's responsibility to drop the course if not being able to complete course requirements. At the end of the course, all registered students will be graded. Students not fulfilling requirements and not dropping the course will receive fail grade. Students can drop the course by the "Last date to drop the course". See below the "Important dates" for details.

ASSIGNMENTS

The course assignments can be of the following type:

Reading

Most of the materials for the course will be on the web. The reading assignments must be completed before the class. The reading assignments will take on average 10 hours per week. Some chapters may require more than one reading to grasp.

Homework

Homework assignments will be distributed during the course. These may include writing parts of or complete user requirements lists, sections of software documentation, change requirements and analysis, new lines of code, testing the code written in the classroom etc. All homework is mandatory. To complete the homework assignments the students may be required to work in groups. It is desired that students complete as many additional and optional skills building exercises from the curriculum.

Exams and Online Exams

By the end of each major course milestone there will be an examination administered either online or in person. These exams serve to provide feedback to the student on the progress and the eventual gaps in knowledge requiring reinforcement. The number of these exams will match that of the main objectives of the course. There will be no makeup exams. All milestone exams are open book exams. At the end of the course there will be a final exam comprised of parts of each of the milestone exams. The final exam is a closed book one. All exams are administered in the classroom and cannot be taken remotely. Exam dates can be found below, section "Course Schedule".

Internship

Trainer(s) is/are encouraged to offer availability to participants for mentoring and coaching during the internship phase.

EXAMINATION AND GRADING

Examination in this course is designed such that it provides to students with the continuous feedback on their progress and the gaps needing reinforcement.

Final Skills Exam, Final Exam and Online Questionnaire

There will be a final exam and final skills exam at the end of the course. Final exams will cover up all material covered during the course. All exams, skills exercises and homework assignments must be completed to qualify for taking the final exams. Students must complete the course feedback questionnaire before receiving the certificate.

The exams will contribute to the total as follows:

Exams	15%
Homework	15%
Final skills exam or project or Project or internship work	30%
Final exam	30%
Attendance and participation in class	10%
TOTAL	100%

The final grade will be determined as in the table:

Grade	%
10	100 – 91
9	90 – 81
8	80 – 71
7	70 – 61
6	60 – 51
5	50 and lower

TOOLS, EQUIPMENT AND LEARNING ENVIRONMENT

- Classroom;
- Lab;
- Personal computer for each student to work on;
- Specific software for the course.

IMPORTANT DATES

Please check the official STIKK and course policies to get the important legally binding dates.

TBD	Pre-qualification test
TBD	Course beginning
TBD	Program adjustment period, course schedule fixing and assigning groups
TBD	Last day to register for the course

COURSE SCHEDULE

Week	Description	Prior reading	Exam
1	Pre-qualification test		Pre-qualification test
	Pre-qlfk. test results discussion. Students registration. Introduction to the course and syllabus.	Course syllabus	
2	Introduction to programming languages		
3	Fundamentals of algorithms: data types, data abstraction	Algorithms	
	Sorting, queues,	Algorithms	
4	searching, search trees	Algorithms	
	Strings, string sorts	Algorithms	
5	Introduction to OOP: Classes and objects, inheritance, virtual functions, abstract classes, polymorphism		
6	Introduction to Process and Life Cycle Models		
	Requirements and Specification		
7	(cont.) User requirements management, Use case, XML, Activity and Sequence Diagrams		
	(cont.) User requirements		
8	Design principles, selecting programming language		
	(cont.) Design principles		
9	User-centered design		First App check-up
	Usability		
10	Visibility		
	Efficiency		
11	Errors and user control		
			App check-up.
12	Testing principles and methods		
13	Testing (cont.)		
14	Deployment, packages		App / Project check-up
15	Source Code Management, versioning systems - CVS		
	Documentation management		
16	Final test		skills exam
	Results of the final test		

This schedule will be followed as much as possible, but there may be changes to it.

Students with special needs or disabilities should contact instructor, STIKK Education Training Coordinator and Project Manager, and inform about their special needs.

ACADEMIC INTEGRITY

This course requires substantial individual effort in order to benefit from the course. The academic dishonesty is defined as a presentation of somebody's else's work (regardless of the source) as your work. Each student is required to work independently on his or her individual assignments. Distributing assignments in any form or copying materials from Internet and other sources is unacceptable. During group work the student is expected to prepare his or her work independently.

Breach of academic conduct will not be tolerated. Punishment will comprise of lowering the grades or loosing points, fail grade (5) in certificate and transcript, showing you have been punished for fraud and up to expelling from the course, revocation of grades and titles, diplomas and certificates already given for the course.

REMEMBER:

Check the date and time of exams from the course schedule above.

All the material of the STIKK Education is copyrighted. Copying and printing any material from exams or curriculum, except when explicitly allowed, will result in punitive measures.

Use of removable storage during exams is prohibited.

Syllabus end

Annex B

Terms and Conditions – Trainers

Trainer's Responsibility and Accountability

After a certain period during the training module that has been conducted, we ask participants to fill out the Training Evaluation Form, so we know whether participants are satisfied or not.

If the average of results in the trainer section of the form is unsatisfactory, we will investigate the cause of participants' dissatisfaction.

If the cause of participants' dissatisfaction is related to poor quality of the trainer's preparation or lack of knowledge, STIKK will replace the current with the second ranked Trainer.

Equipment usage

Trainers are partially responsible that participants of the training programme are responsibly using Equipment.

Internship

Trainers have the responsibility to prepare participants for the internship period and are encouraged to offer availability to participants for mentoring and coaching during the internship phase.

Venues

Details of the specific venue will be sent in the joining instructions for all training courses.

Dress code

There is no dress code; however, most participants choose to wear casual clothing. Due to variable temperatures of air conditioned rooms, layers are advised.

Liability

STIKK does not accept responsibility for anyone acting as a result of information or views expressed on its training courses including course material. Opinions expressed are those of individual trainers and not necessarily those of STIKK. Participants should take professional advice when dealing with specific situations.

Prevailing terms and conditions

Please note that this and all other STIKK Education pre-contractual documentation shall not constitute an offer. All services provided by STIKK are on the basis of STIKK Education's terms and conditions and if you wish to engage in any STIKK Education services we shall only provide them if you accept the STIKK Education Terms and Conditions.