



## **THE PRINCIPLES OF POSSIBLE COOPERATION BETWEEN METROPOLITAN UNIVERSITY AND ICT COMPANIES**

Metropolitan University is interested in a very close long-term mutual cooperation with ICT companies so as to satisfy their demand for IT and software engineers to the highest possible degree, and adjust its curricula to the needs of ICT companies. In this sense, Metropolitan University can offer the following models of collaboration to the interested companies:

### **Scholarship models:**

The development of ICT companies can be very dynamic, especially in the field of software development for foreign customers, on condition that the problem of lack of new, well-educated graduate students prepared for successful practical work is solved. What Metropolitan University offers to ICT companies is to “tailor-make“ qualified and prepared young engineers for software development and other tasks in ICT. In order to increase the interest of high-school students for the studies in the field of computer sciences, it is important to offer the prospect of successful employment, besides free studies. Metropolitan University believes that the right way to increase not only the numbers, but also the competence of graduate engineers of computer science, is to offer them a package which would include:

- Tuition fee (2,000 EUR per academic year)
- Minimum scholarship (e.g. 5-10,000 RSD monthly) optional
- Employment upon graduation

During the studies, the student who is awarded scholarship from an ICT company gains useful practical and professional experience by working on specially chosen projects for this company (up to 25% of regular working hours on average), and he/she is

adequately prepared for working at this particular company later. Upon graduating, the student is obliged to work for the company which awarded the grant for as many years as he/ she was receiving the scholarship/ tuition fees.

In further text the term grant will refer to the tuition fees paid for the student who receives grant from the grant giving company, and/or to the (small) scholarship, depending on the possibilities of the grant giving company.

The university has proposed three models of grant giving to ICT companies:

1. **Awarding grants for all four academic years** (the selection is made as early as at the enrollment). Based on the agreement made between the University and the company, which should be made as soon as possible and not later than April in the first academic year, the University promotes the grant in high schools and in the media. On the basis of the received applications, the University makes the preliminary selection of the candidates, giving the list of candidates to the company, which reaches the final decision about awarding grants (after a possible interview with the candidates). The contract signed by the University, the company and the student defines the rights and obligations of all three parties.
2. **Awarding grants after two academic years** (the selection is conducted at the end of the second year of studies, and the grant covers the third and the fourth academic years). If the University pays the tuition fees of the chosen student during the first two academic years, then the company – the new grant giver, should cover the expenses for the University for the first two years, in line with the contract concluded by all three parties (UM-company-student).
3. **Choosing a student at the end of the fourth academic year** (the selection is made during the 4th academic year). If the University has paid the tuition fees of the chosen student, then the company – the new grant giver should cover these expenses for the University, according to the contract concluded by all three parties (UM-company-student). The expenses shall cover the tuition fees for the period of 4 academic years, that is 8,000 EUR, increased by 10%.

When the student is awarded a grant, Metropolitan University, the company (the grant giver), and the student (the grant receiver) conclude a contract which regulates all the rights and obligations of the contractual parties. Here is a list of the most important rights and obligations of the contractual parties.

#### **Obligations of the grant receiver:**

1. **During his/ her studies, the student shall work 10 hours a week on average** on the development projects and other tasks of the grant giving company. The company can divide these working hours in line with its needs, so in the first

academic year there can be fewer than 10 working hours per week. In later academic years, when the students are prepared for working on more complex tasks, the number of working hours can increase.

2. **The student shall take the elective courses** suggested by the grant giving company.
3. **The student shall work on the project assignments** set by the grant giving company on all university courses (unless the company leaves him/ her free choice)
4. **The student shall write his/ her final thesis on the topic set by the grant giver.**
5. **Students shall have professional practice in the grant-giving company.** Professional practice lasts 4 months in the seventh semester of studies.
6. **Upon graduating, the student shall work for the grant giver for not less than 4 years**, that is, for as long as he/she has been receiving the grant.
7. **The student must get 60 ECTS per academic year, with no less than 8.00 out of 10.00 GPA.** More precisely, this means that the student must pass all the exams from the study program in each academic year.
8. **If the student grant-receiver does not fulfill his/ her duties** from the Contract, apart from the written warning, he/ she will get a grant reduction for a certain period of time, or until the end of the studies, or the payment of grant may be blocked for a certain period of time. In special cases, when the student does not fulfill the duties from the contract, the Grant Contract could be broken, on which condition the grant receiver shall return the received grants to the grant giver. If the violation of the contract by the grant receiver causes financial damage, the grant receiver shall compensate this damage.
9. **Should the student refuse to work for the grant giving company upon graduating**, he/ she shall pay for the damage on the level defined by the grant contract.

#### **Obligations of the University:**

1. **Metropolitan University undertakes to provide the grant receiver with the knowledge, skills and competences in line with the needs of the grant giver.** The grant receiver shall be given project and homework assignments in line with the needs of the grant giving company. Further, the student shall take the elective courses chosen by the grant giver. Finally, the topic of the final thesis shall be agreed with the grant giver.
2. **Professional practice at the grant giving company.** The University shall send the grant receiver to the professional practice at the grant giving company. The practice will last 4 months (October 1st – January 31st, or from July 1st if necessary) in the 7th semester, in line with the Contract on Professional Practice.

3. **As an additional motive, Metropolitan University gives the grant giver the possibility to use the office premises of the center of software development, for the work with the grant receivers. For each grant receiver, the company gets to use 5m<sup>2</sup> of office space.** The work equipment in the Educational and Business Center in Niš will be brought by the grant giving company. The grant giver can move the whole company or its sector/ project team and rent the space of the Educational and Business Center if it needs to use the space larger than 5m<sup>2</sup> per grant receiver.
4. **Apart from the grant receivers, other students of Metropolitan University can also be hired** for working on development projects of the grant giving company, in exchange for a fee.

#### **Obligations of the grant giving company:**

1. **The company shall pay 2,000 EUR as a tuition for the students for each academic year** by the beginning of the academic year for which the tuition is due. The company does not have an obligation, but it is recommended to pay smaller monthly grants to the student (5,000 to 10,000 RSD a month) in order to increase the number of potential grant candidates, thus improving the selection process.
2. **The company shall define its objectives around the educational profiling of the student grant-receiver at the beginning of each academic year** in order to select optional courses, project work and homework tasks of the student grant – receiver.
3. **The company shall compile a program of engagement of the student grant – receiver in their projects and business within the limit of 10 hours a week.** The tasks assigned to the student need to be in line with the syllabus that the student has completed at the University and exams that the student has already passed. During the first year the student's workload can be smaller, whereas in the final year it can be more than 10 hours a week (within the limit of average 10 hours a week during studies). The company needs to inform the University and the student in question about the program of engagement.
4. **The company organizes the work of the student grant-receiver** within their scope of work of 10 hours a week in the Educational-Business Center of the University (unless other premises are agreed upon, for example, companies). The company gets premises of 5 m<sup>2</sup> per student grant-receiver to use for free with the obligation to pay a part of overhead costs, namely heating and power supply, maintenance and security (night shift of security guard). The company provides the computer and office furniture for the students grant-receivers, unless otherwise agreed with the University.

5. **With the purpose of professional guidance of the student grant-receiver, the company shall assign one or several mentors** (if the students work on several projects). The mentor, along with the University and the student grant-receiver define the educational requirements that the student needs to fulfill, according to the curriculum that the student grant-receiver has enrolled.
6. **If the company engages other students of the University in their project works**, it would be necessary to obtain permission from the University in advance, and the engagement should in no way intervene in their normal educational process.
7. **The company shall not engage** the student grant-receiver, as well as other students **in terms of employment** in any other way (different from the conditions stated under 6) before the student completes bachelor academic studies.

Besides grants for bachelor academic studies (BA), the company can donate a grant to students at master academic studies (MA) as well as doctoral studies (PHD) at Metropolitan University.

## **Internship models:**

**Students do internship in the period of 4 months in the seventh semester** of bachelor academic studies (October 1st – January 31st). The internship is regulated by the internship agreement concluded between the University and the company. It defines the rules of internship for students. It is expected that the company should provide monthly income for interns in the amount of 10,000 RSD a month. The company and the University agree upon the number of interns who will do the internship in the company from the 1st October every year, latest by June. Upon request of the students or the company, the University can approve internship in the period of 7 months (from July 1st until January 31st).

## **Cooperation Model through EU Projects (Horizon 2020):**

The University is interested in participation in the program Horizon 2020 and is looking for potential partners among ICT companies. The University agrees on the program for which companies express interest for participation. The University and the company mutually inform each other about the plans and intentions to participate in the EU Horizon projects in order to eventually agree on mutual participation.

Metropolitan University currently participates in three international projects financed by the EU:

- **Open Discovery Space:** A socially-powered and multilingual open learning infrastructure to boost the adoption of eLearning resources (Open Discovery Space)
- **INCOMING** Interdisciplinary Curricula in Computing to Meet Labor Market Needs
- **VisMath - Visuality & Mathematics:** Experiential Education of Mathematics through Visual Arts, Sciences and Playful Activities

## **Cooperation Model of ICT Companies and Metropolitan University on projects of technological development and innovative projects by the Ministry of Education, Science and Technological Development:**

The University offers partnership to ICT companies in order to make bids for projects financed by the Ministry of Republic of Serbia in charge of science and technological development. Currently, this institution is the Ministry of Education, Science and Technological Development.

## **Cooperation Model through Knowledge Transfer:**

The following models of cooperation are possible:

1. Participation of ICT companies' staff in lectures at Metropolitan University
2. Professional development of ICT companies' staff through courses at Metropolitan University

Metropolitan University, through the Faculty of Information Technology offers the following study programs in the area of informatics:

1. Bachelor studies in the period of four years (240 ECTS)
  - 1.1. Information Technology
  - 1.2. Software Engineering
  - 1.3. Computer Game Development
  - 1.4. Business Information Systems
2. Master studies in the period of one year (60 ECTS)
  - 2.1. Software Engineering
  - 2.2. Information Security
3. Doctoral Studies in the period of three years (180 ECTS)
  - 3.1. Software Engineering

### 3.2. Computer Science and Bioinformatics

Employees in ICT companies who are experts in certain areas can do guest lectures at the University, or work as teaching assistants on certain courses, if they show interest. They can also be mentors of project assignments and graduation papers of students.

On the other hand, if employees express interest in acquiring additional knowledge, the University can agree with them to organize specific or already prepared training courses held by the University professors. Employees can also enroll at online studies at the University in one of the bachelor, master or doctoral programs, if they are interested in furthering their studies or if this is necessary.

**The educational-business center of the Metropolitan University** in Niš is on the following address: 80-86 Cara Konstantina Blvd. (by the entrance of the Electronic Industry) The premises have 1650 m<sup>2</sup> out of which 750 m<sup>2</sup> are used (ground floor for lectures and university administration). The rest of the premises, 900 m<sup>2</sup>, is on the first floor and the space is planned for:

1. **Software development center**, for ICT companies, which would be leased the space for the work of students grant-receivers, or rented by market conditions for software development.
2. **ICT Incubator**, aimed at current and future students of the University who start their own ICT companies.



