



## EVALUATING REQUIREMENTS OF INTERNSHIP FOR STUDENTS OF ENGINEERING

CIOT, M[elania] - G[abriela] & CIOT, L[ucian] - M[ihai]

**Abstract:** *The following paper will focus on the importance of internship for engineering students. In the beginning, it will contain a presentation of the important goals of internship programs and the efficiency for students generated from a productive partnership between university and host companies. In order to underline better the substance of an internship program, the author will frame the work of the three main educational and social actors involved: supervisor from university, tutor from the host companies and students, by pointing out each role divided into the periods: before, during and after internship program. The article ends with a description of the components of the evaluation report stressing on the role of educational actors and the evaluation requirements pointed out by each of them.*

**Key words:** *internship, tutor, supervisor, evaluation*

### 1. INTRODUCTION

Internship programs provide for all students an opportunity to enhance their academic programs with their field experience, related to their career interest, in a variety of settings. The value of work-related experience has been demonstrated many times over by the successful placements of the graduates in the world of work. It is a key component of how Technical University of Cluj-Napoca programs provide opportunities to acquire the necessary theoretical and applied knowledge which permits students to function effectively in the field. During the internships periods, students encounter the practicing professionals and see how theory integrates with practical learning. In each instance, students confront the challenges and issues which they eventually will meet in their careers and lives (*Internship Overview*, 2010).

The pedagogical benefits of internship programs for students are: the opportunity and the atmosphere in which students may test theory learned in the classroom in an actual working situation and discover the value of work and the rewards of accomplishment, the enhancement of educational aspects of the career development process, the system of accountability which encourage professionalism, the context in which the students could develop positive working habits, the aptitude for or interest in a selected field, the natural transition to the highest level of professional preparation as a complement to the education goals of the university.

Among the host companies of internship programs of Technical University of Cluj-Napoca, one host company from computers field (Arobs Transilvania Software Company) developed an efficient internship program in which each actor involved (university-host company-students) plays an equal role.

### 2. INTERNSHIP REQUIREMENTS

Any student is eligible for an internship program and has to fulfill the following criteria: has earned enough credits; has submitted a resume and an Internship Request to its

faculty/department; has satisfactorily completed a pre-internship seminar; meets the criteria established by the university; has a different experience for each subsequent internship and has the university approved supervisor (*Internship Course Requirements and Grading*, 2010).

### 3. INTERNSHIP GUIDELINES

The faculty establishes the pre-requisites for students wishing to undertake the internship. The following general guidelines are: the internship has 5 credits; the 30 site-directed hours equals one credit; for non-credit internships 30 site directed hours is the equivalent of one credit for the purpose of determining faculty load; the internship credit will be limited to a maximum of 5 credits towards graduation.

### 4. INTERNSHIP SUPPORT FROM UNIVERSITY

Before the internship, the supervisor will inform constantly the students about the opportunities of internship program; will meet with local, regional, and national employers for internship development; will schedule and instruct pre-internship seminars; will verify all Internship Learning Contracts for accuracy and completeness and will seek to identify current and measurable methods to evaluate interns and the internship program by working with experiential educational professional associations and faculty and students feed-back.

During the internship, the supervisor will communicate status of all interns to host companies where the internship programs are developing throughout each semester and will help the host companies with intern problems or internship problems upon their request.

After internship, the supervisor will maintain records on all current and former interns and internship placements by major and semester (*Internship Requirements*, 2010).

### 5. INTERNSHIP GUIDELINES FOR THE HOST COMPANIES

For an efficient internship program, it is advisable that each host company (through its tutor) of internship program should take into consideration its responsibilities developed into three periods: before, during and after internship program.

Before the internship, the host companies' internship tutor will communicate with supervisors from university about learning goals and objectives prior to the beginning of internships; will determine if the level of tutoring and the qualifications of the students is consistent with the department's internship objectives; will meet with students and will facilitate completion of Internship Learning Contract with students and supervisor.

During the internship, the host companies' internship tutor will maintain regular contact with supervisors of student interns and meet or talk with interns a minimum of once a week; will evaluate all internship experiences in consultation with

supervisors; should provide interns with specific final report criteria and due dates and will develop a weekly reporting mechanism to track hours worked and to ensure that students are meeting their learning goals and objectives.

After the internship, the host companies' internship tutor will schedule a minimum of one required group meeting with all interns following each internship and will make sure that all required paperwork is submitted by the interns.

For the host companies, the internship represents also a good opportunity to establish individual collaboration and a possibility to choose the future employees.

## 6. STUDENTS INTERN GUIDE

The internship was designed in order to provide students with a guided introduction to the professional working world. As a part of this training, students must meet the following requirements to successfully participate in an internship experience (*Student Internship Handbook*, 2010).

Before the internship, students must confer with their faculty advisers to plan the timing of their internship(s) and to make sure that all departmental requirements are met; must submit an Internship Request and resume for an internship; will receive an Internship Learning Contract upon submission of the request form.

During the internship, the students must complete any written reflections or other requirements as designated by the companies where the internship is taking place on the Internship Learning Contract and must complete an evaluation and return it to their supervisor.

After internship, students will submit and/or present their final reports as designated by their internship placements to their supervisor.

## 7. EVALUATION REQUIREMENTS FOR INTERNSHIP STUDENTS

Following the models developed by other European technical universities and due to a fruitfully collaboration between Technical University of Cluj-Napoca and Arobs Transilvania Software Company (a host company), it was constructed a model of evaluation report for internship students. This evaluation report is divided into three parts: one to be completed by the internship tutor from the internship placement (company), one part to be completed by the student and one part to be completed by the internship supervisor from university (*Evaluating your internship experience*, 2010).

All the three actors involved in the evaluation (supervisor from university, tutor from the company and the student) have to make the evaluation by using the following criteria: Excellent (E), Good (G), Satisfactory (S), Fail (F), Not applicable (N), accompanied by remarks. For the students evaluation there are four open questions besides other questions with closed answers. Each of the three evaluations ends with a global evaluation.

The evaluation requirements for internship students are:

1. The evaluation of student by the internship tutor contains five main parts with components, which are evaluated under the criteria mentioned above: abilities [knowledge of technologies: concepts, techniques, terminology, etc; listening abilities and understanding of requirements; analytical skills (capacity to identify the components of a situation and establish their interrelationship, identifying the guiding principles); ability to synthesize (good assimilation and use of several pieces of information, ability to step back and gain perspective, etc); achievement of objectives], communication [quality of oral communication (structure his ideas, exhibit clarity, be concise, express his point of view, etc); quality of written communication (clarity, well-structured ideas, conciseness,

etc.); aptitude for formal and informal interpersonal relations; aptitude for teamwork, transparency, sharing information, acknowledgement, and use of colleague's qualities; regularity of reports submitted to internship tutor], professional behavior [attendance, punctuality, motivation, proactiveness, involvement; precision and care in carrying out work; acceptance of criticism, general attitude, respect], organization of work [management of priorities, ability to evaluate the amount of time required, planning of work] and autonomy [autonomy regarding the understanding of requirements and their analysis during first part of internship, autonomy regarding identification of solutions during second part of internship and decision-making capacity, resourcefulness].

2. Internship evaluation by internship student has two parts, one with close answers and one with open answers, which require comments. First part looks for the following evaluation requirements: quality of tutoring; value of skills acquired; quality of work environment; infrastructure provided for internship and work atmosphere. The second part requires comments on the following elements: "aspects that I tried to improve during my internship and the improvements observed"; "my professional qualities"; "aspects that I would like to perfect in the professional sphere" and "other comments".

3. Evaluation by the university supervisor aims four main components: evaluation report (student's professional behavior; student's personal behavior), activity report (ability to synthesize; structure; simple description of scientific aspects; potential of results), discussion with student (personal discussion) and host company tutor/representatives (tutoring of internship students; infrastructure and means available to student; communication and information exchange with internship tutor).

## 8. CONCLUSIONS

Internship program represents a valuable experience for the students; during it, they could gain professional skills which will be useful in their future careers, they could observe professionals working in the positions that look interesting for them, they could see if they like the work environment, they could learn more about their personality, as they worked with the coworkers and tutors and, finally they could find out more about they career options. The internship will be experienced by all the educational and social actors involved (teachers, supervisors, tutors) for the benefit of all.

## 9. REFERENCES

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