Job description

The School of Engineering (EPB) of the Université Libre de Bruxelles (ULB) offers a part-time academic position in the area of Computer Science. This position is opened in the context of the new Bachelor program in Civil Engineering jointly organized by the EPB and the University of Mons at the Campus Charleroi.

The successful candidate will be charged with teaching the course “Programmation Orientée Objet” (described further below) in the 2nd year of this Bachelor program. Teaching at this level is in French, so excellent level of French is a requirement. Since the course is structured around C++, proficiency in C++ is a requirement.

Educational goals: The teaching duties include lectures, as well as exercise and laboratory sessions. The successful applicant will get aid in the organization of exercise and laboratory sessions from a teaching assistant.

Courses covered at the time of recruitment: “Programmation Orientée Objet”

Specific learning outcomes: Being able to solve simple problems (involving e.g., GUI, web applications, etc) by utilizing object oriented programming and giving proof of the following skills:

- Problem decomposition into classes
- Producing class diagrams
- Programming in C++
- Performing associated activities such as searching for missing information, re-using existing components and libraries, testing and debugging, documenting code, version management, etc.

Course Contents:

- Review of imperative (non object-oriented) programming, including comparison of python with C++
- Manual memory management in C++; comparison with automatic memory management in Python
- Introduction to classes and objects
• Sending of messages
• Encapsulation
• Inheritance
• Polymorphism
• Cloning and testing equality of objects
• Interfaces and abstract classes
• Class diagrams, sequence diagrams and state transition diagrams in UML
• Genericity
• The C++ standard template library: lists, graphs, ...
• Serialization
• Design patterns and model driven architecture

Qualifications required
PhD Degree (with doctoral thesis) in Engineering (specialization Computer Science) or Computer Science

Skills required
• An Excellent level of French is required
• Proficiency in C++ programming and object-oriented design.

Interested?
For more information, please contact Mr/Ms Gérard Degrez (telephone: +32 2 650 36 29 – E-mail: le-doyen-polytech@ulb.be).

Applications must be sent by e-mail to the rectorate of the Université Libre de Bruxelles (recteur@ulb.ac.be) and to the faculty deanship (le-doyen-polytech@ulb.be).

They must include the following:
• an application letter
• a Curriculum vitae including a list of publications: you can complete a standard form via our website at https://www.ulb.be/fr/documents-officiels/completer-votre-cv-en-ligne. Once completed, it must be downloaded and attached to the application file.
• a teaching dossier including a 7,000-character report (4 pages) on the applicant’s previous teaching activities and a teaching project for the first five years in this position; these must be relevant to the faculty and to the teaching profiles for the programmes to which the applicant is to contribute
• the names and e-mail addresses of five referees (respecting the gender balance) who may be contacted by those in charge of evaluating applications. These referees should not have conflicts of interest because of family or emotional ties.

By sending in their application, applicants acknowledge they have read and understood the additional information and the regulations relevant to academic staff, available at the following address http://www.ulb.ac.be/emploi/academique.html.