

Monash finds IBM® a Rational® partner† for software engineering course

Overview

■ **Problem**

Monash University needed to ensure their Bachelor of Software Engineering degree provided the right skills to the next generation of IT professionals.

■ **Solution**

The partnership with IBM gives Monash University access to software development tools, guest lecturers and hands-on workshops, providing valuable skills that improve their students' employment prospects.

■ **Benefits**

Both students and the faculty benefit from this partnership. Gaining hands-on experience with IBM Software ensures graduates are highly sought after in the IT industry. In addition, Monash has a current, relevant curriculum which is keeping abreast of industry trends with access to the latest technology.



Monash's Bachelor of Software Engineering degree was designed to fulfil industry demand for graduates who had the capability to work on large software systems that meet complex information processing challenges.

The four-year course teaches skills in computer science, problem solving, programming, software development methodologies, software processes and lifecycles, software quality testing,

technical documentation and the mathematical foundations of software engineering. It includes practical experience, such as 12 weeks of paid vacation employment. High-achieving local students may also apply for \$15,000 Industry-Based Learning scholarships and gain work experience through a 22-week industry placement during the third year of their degrees.

Giving students real-world skills

IBM has worked in partnership with Monash University on the Bachelor of Software Engineering degree since 2002, giving the university – at no cost – a wide range of IBM Rational software development tools for use in the course.

“We prefer to give the students experience with the tools that are most commonly used in the industry,” said Dr Sita Ramakrishnan, Senior Lecturer and Course Leader of the Bachelor of Software Engineering. “We teach model-driven development as part of the course – IBM Rational Software Architect is ideal for this approach. We also teach a subject on software testing, and students use tools like IBM Rational Functional Tester and Rational Performance Tester.

“It gives students a feel for the tools they are likely to use when they graduate.”

Hands-on workshops

In 2006 the University asked IBM to help final-year students gain the maximum value from these development tools.

“Initially, Monash asked us to deliver a standard guest lecture and we brought in some of our most experienced people to talk about our products and how students could use them,” said Davyd Norris, Senior IT Architect, IBM Rational Software. “We felt it would have a lot more impact if we actually gave them hands-on exercises and showed them how to use the tools. So around mid-year, we delivered a three-day workshop.”

“The students all said they loved the workshop and really got a lot out of it,” added Ramakrishnan. “We’re running another workshop in 2008. IBM’s support is always a real help.”

Industry projects

As part of the final year, students work in groups to deliver a software engineering project for an external customer.

“We source a range of small projects from industry and assign them to students,” said Ramakrishnan. “The students have to meet with their clients, scope out the project requirements and set deadlines. They gain practical experience of working in teams and the software development process. It’s a chance for them to start applying the skills they have developed in the course to real-world problems.”

In 2006, one group of students helped a small business customer find the most efficient strategy to migrate existing JEE applications into its portal environment. In 2007, another group worked with a games development company on a framework to test new games under development. Yet another project group put together a service desk tool to report and resolve customer complaints for a consulting firm.

“Often, the customers request the students use IBM Rational tools because they use these tools themselves,” said Ramakrishnan. “Using the IBM Rational tools means once the students have completed their projects, it makes them easier to hand over to the customers.”

“The final-year projects teach valuable job skills. When I visited customers recently, I saw at least half a dozen graduates who had attended the workshops working full time... and using the IBM Rational tools that had been part of their projects.”

– Davyd Norris, Senior IT Architect, IBM Rational Software.

Improving employment prospects

Gaining hands-on experience with these popular tools makes Monash University Bachelor of Software Engineering graduates highly sought after in the technology industry.

“The final-year projects teach valuable job skills,” said Norris. “When I visited customers recently, I saw at least half a dozen graduates who had attended the workshops working full time in the industry and using the IBM Rational tools that had been part of their projects.”

“The final-year projects are one of the many routes by which our students find jobs,” adds Ramakrishnan. “They also find work through our mandatory vacation employment or through our Industry-Based Learning scholarships, which IBM also supports.”

To find out more about IBM, visit www.ibm.com/au.

To find out more about Monash University’s Faculty of Information Technology, visit: www.infotech.monash.edu.au.

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“The IBM Workshop was a chance to gain a great insight into the tools and techniques used by industry. The workshop teacher shared his experiences and instructed us how we could use similar techniques and tools in our own projects. Getting this training will be invaluable when beginning our career in the IT industry and will give us the edge over other software engineering graduates. The learning outcomes from this workshop have now become standard in all my current and future software development work and have made me a better software engineer because of it.”

– Tim Ward, Student.

For more information

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The customer case study referred to in this publication is based on information provided by Monash University and illustrates how one organisation uses IBM products. Many factors have contributed to the results and benefits described.

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