



JUSTICE BRANDEIS SEMESTER (JBS)

Web Services and Mobile Applications



www.brandeis.edu/jbs

PROFESSORS:

Tim Hickey / Pito Salas

PREREQUISITES: COS11a, 12b, 21a

JBS PROGRAM FULFILLS:

- One semester needed for graduation
- Many other university requirements

Are you an innovator? Here is your chance to prove it. Engage in the theory and practice of developing Web and mobile applications in this start-up- style computer science program. Each week, students will participate in lectures, discussions, student presentations, lunch meetings, guest lectures, computer lab work, and field trips to local companies. At the end of the summer, you and your peers will demonstrate your applications in a public presentation open to the Brandeis community.

SUMMER PROGRAM / 12 credits

8 weeks

June 1–July 23, 2010

COSI 152aj / 4 credits / NEW! **Web Application Programming**

This introductory course covers the fundamental languages and tools of Web programming, including HTML/CSS for page layout, JavaScript/Ajax for client-side interaction, and server side programming in Java, Ruby, and SQL. The course will also discuss security, scaling, and optimization, and multitier architectures.

COSI 153aj / 4 credits / NEW! **Mobile Application Development**

Students in this course will receive an introduction to the design and analysis of mobile applications. Topics to be covered include the architecture of mobile devices, application programming interfaces (APIs) for graphical user interfaces on mobile devices, location-aware computing, and social networking. The course also covers the theory and practice of space and time optimization for these relatively small and slow devices.

COSI 154aj / 4 credits **The JBS Incubator**

This course serves as an introduction to software engineering for Web and mobile applications. Topics covered include agile programming techniques, rapid prototyping, source control paradigms, effective software documentation, design of effective APIs, software testing and analysis, and software licensing. You'll also receive an introduction to business plans for software entrepreneurs.

FALL PROGRAM / 8 credits

[Optional extension]

16 weeks

August 26–December 16, 2010

Expand upon your summer JBS Program with a fall internship and independent study course. Students must complete the summer program to enroll in the fall JBS Program extension.

COSI 89aj (undergraduate) / 4 credits **COSI 293aj (graduate) / 4 credits** **Research Internship**

This course is a full-time internship with at least 300 hours from August to December. Students will blog about their experiences, comment on classmates' blog entries, and write papers about their internship and its relevance in the world.

COSI 98aj (undergraduate) / 4 credits **COSI 210aj (graduate) / 4 credits** **Independent Study**

In this independent study course, students will read scholarly articles related to Web services, mobile applications, and cloud computing. Students are required to write a final paper ideally related to their internship.

MORE INFORMATION

- Application Deadline: March 15, 2010
- Visit www.brandeis.edu/jbs for more information on the application process, course attributes, cost and financial aid, housing and more.