

Being mobile in bachelor computer science curricula

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Why being mobile...

Gadgets change the world:

! Third world

- Health
- Sport
- Distance learning

...

Computer Science Curricula 2013

The Joint Task Force on Computing Curricula
Association for Computing Machinery (ACM)
IEEE Computer Society

Mobile device development is covered in the new **Platform-Based Development (PBD)**

- programmable devices employed in introductory programming courses
- *Tradeoffs:*
 - bring compelling real-world contexts into the classroom
 - considerable care to not swamp pedagogic objectives
 - the specificity of the platform may impact the transferability of course content to downstream courses.
- **HCI/Foundations (o), HCI/Programming Interactive Systems (e), IAS/Digital Forensics, IS/Advanced Representation and Reasoning, NC/Mobility (o), PL/Event-Driven and Reactive Programming**

ÉCOLE POLYTECHNIQUE

Année	Septembre	Octobre	Novembre	Décembre	Janvier	Février	Mars	Avril	Mai	Juin	Juillet	Août
1	Incorporation							INF311: Introduction à l'informatique				
								INF321: Principes des langages de programmation				
2	INF 421: Programmation et Algorithmique		INF422: Composants d'un système informatique			INF431: Algorithmique. Réseaux. Langages						
	INF423: Fondements de l'Informatique : Logique. Modèles. Calculs											
			INF441: Modal			INF441: Modal		INF441: Modal				
3		Programmes d'approfondissement (Master 1)					Stage de recherche (Master 1)					
4	Année professionnalisante (Master 2)											

INF441 Modal d'Informatique - (Oct. - Jan): **Applications pour téléphone**

Prérequis: Aucun

HTML5, jQuery, AJAX, PHP, Phonegap (Cordova) - easy mobile app dev (javascript, accéléromètre, appareil photo embarqué)

Période 1 (Sept - Oct.): Pas d'option proposée

Période 2 (Oct. - Jan): Applications pour téléphone

Période 3 (Jan - Avr.): Web - Bioinformatique - Image

Période 4 (Avr - Jui): Web - Programmation Efficace - Réseau

UNIVERSITY OF APPLIED SCIENCES UPPER AUSTRIA

Mobile Computing (Bachelor's Degree Programme)

Sem1: fundamentals

Sem2: JavaME – Android, C#/.NET - Windows Phone 8 programming

Sem3: C++ - Qt, C++ - Tizen programming; Mobile Communication; Mobile Device Technology

Sem4: Mobile Business (BlackBerry, NFC & Co.); Mobile Multimedia (iOS, Flash)

Sem5: Mobile Sports, Health, Games

Mobile Computing (Master's Degree Programme)

Sheridan's Faculty of Applied Science and Technology

Bachelor of Applied Computer Science (Mobile Computing)

Sem1: Programming Principles, Operating Systems Fundamentals, Mathematics for Computing, Edge to Core Network Foundations, Composition and Rethoric

Sem2: Mobile Computing

Sem3: Mobile Device Application Principles

Sem4: Mobile Web Application Development

Sem5: Advanced Mobile App Development

Sem6: Hybrid Mobile Development

Sem7: Distributed Mobility, Artificial Intelligence and Mobile Computing

Started June 2013

Tokyo University of Science

- **Faculty of Science and Technology - Department of Information Sciences**
 - basic mathematical information - applied mathematical information - **computer science**

(Introduction to Computer Science; Logical Mathematics 1 / 2; Automaton; Information Communications Networks; System Programming; Information Structures; Database Systems; Information Mathematics 2-B and Discussion; Numerical Analysis 1; Programming Language 1 / 2; Formal Language; Computer Methods; Theory of Calculation 1 / 2; Compilers; Artificial Intelligence; Theory of Biological Information; Information Theories and Discussion; Pattern Recognition; Life Information)

Massachusetts Institute of Technology

- **6.150 Mobile Applications Competition**

Prereq: Permission of instructor

Units: 2-2-2 [P/D/F]

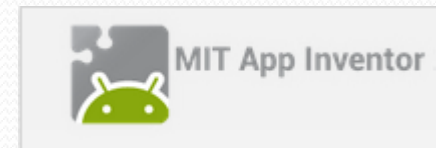
Student teams design and build an Android application based on a given theme. Lectures and labs led by experienced students and leading industry experts, covering the basics of Android development, concepts and tools to help participants build great apps. Contest culminates with a public presentation in front of a judging panel comprised of professional developers and MIT faculty. Prizes awarded. Enrollment limited.

Staff

Mobile programming for High School

Google - Computer Science for High School

➔ App Inventor



- Welcome Teachers! Getting ready to teach with App Inventor... <http://appinventor.mit.edu/explore/>
Computational thinking
- Computer Science is Fun with Visual Programming!
AppInventor – training workshop *Spiru Haret* University

Conclusions

- Mobile CS curricula
- Mobile thinking
- Mobile teaching
- Mobile learning
- Mobile programming / computing / agent / networking / platform / technology / devices / cloud...
- Mobile labs

Beeing mobile...