

## 804131 - BETMA7-M - Specialization Block in Applied Multimedia Technologies VII

Coordinating unit: 804 - CITM - Image Processing and Multimedia Technology Centre  
 Teaching unit: 804 - CITM - Image Processing and Multimedia Technology Centre  
 Academic year: 2019  
 Degree: BACHELOR'S DEGREE IN MULTIMEDIA STUDIES (Syllabus 2009). (Teaching unit Optional)  
 ECTS credits: 6 Teaching languages: Catalan

### Teaching staff

Coordinator: Fernandez Duran, Pablo

### Degree competences to which the subject contributes

Specific:

5. (ENG) Aplicar nous coneixements teòrics i pràctics, relacionats amb la creació de continguts i aplicacions interactives multimèdia orientades al seu ús als àmbits de: la formació, la salut, l'oci o l'entreteniment i els negocis i activitats professionals.

Transversal:

1. SELF-DIRECTED LEARNING. Detecting gaps in one's knowledge and overcoming them through critical self-appraisal. Choosing the best path for broadening one's knowledge.
2. EFFICIENT ORAL AND WRITTEN COMMUNICATION. Communicating verbally and in writing about learning outcomes, thought-building and decision-making. Taking part in debates about issues related to the own field of specialization.
4. EFFECTIVE USE OF INFORMATION RESOURCES. Managing the acquisition, structure, analysis and display of information from the own field of specialization. Taking a critical stance with regard to the results obtained.

### Learning objectives of the subject

Learn the skills to use the necessary tools for the programming of native applications with Android.

### Study load

Total learning time: 150h	Hours large group:	0h	0.00%
	Hours medium group:	60h	40.00%
	Hours small group:	0h	0.00%
	Guided activities:	0h	0.00%
	Self study:	90h	60.00%

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### Content

<p>1. Introduction to Android</p>	<p>Learning time: 24h Practical classes: 8h Self study : 16h</p>
<p>Description: Fundamentals of the Android programming. Application components. Application resources.</p>	
<p>2. User interface (I)</p>	<p>Learning time: 48h Practical classes: 16h Self study : 32h</p>
<p>Description: Views, ViewGroups and Layouts. Optimal layouts. AdapterView and Adapters. Fragments and ActionBar. Design patterns.</p>	
<p>3. Multi-thread programming and of the communications</p>	<p>Learning time: 48h Practical classes: 16h Self study : 32h</p>
<p>Description: Threads, AsyncTask and TimerTask. HttpURLConnection and JSON. RESTful Web Services. WebSockets.</p>	
<p>4. Components</p>	<p>Learning time: 24h Practical classes: 8h Self study : 16h</p>
<p>Description: Activities. Broadcast receivers. Alarms. Threads. Services.</p>	
<p>5. Localization and Multimedia</p>	<p>Learning time: 24h Practical classes: 8h Self study : 16h</p>
<p>Description: Programming with the geographical localization library. Programming of multimedia services: photo, audio and video.</p>	



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### Bibliography

#### Basic:

Meier, R. Professional Android 4 application development. Indianapolis: John Wiley & Sons, 2012. ISBN 9781118102275.