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 negocios 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

<table>
<thead>
<tr>
<th>Total learning time: 150h</th>
<th>Hours large group:</th>
<th>0h</th>
<th>0.00%</th>
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<tbody>
<tr>
<td></td>
<td>Hours medium group:</td>
<td>60h</td>
<td>40.00%</td>
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<tr>
<td></td>
<td>Hours small group:</td>
<td>0h</td>
<td>0.00%</td>
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<tr>
<td></td>
<td>Guided activities:</td>
<td>0h</td>
<td>0.00%</td>
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<tr>
<td></td>
<td>Self study:</td>
<td>90h</td>
<td>60.00%</td>
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## Content

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

Basic: