Assessment and subject description

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| Óbuda UniversityKandó Kálmán Faculty of Electrical Engineering | | | | | | Institute of Microelectronics and Technology | | | | |
| **Subject name and code: Electronics Technology laboratory KMEET12ANC,** **Credits: 2****Full-time, Spring Semester** | | | | | | | | | | |
| Course: Electrical engineering | | | | | | | | | | |
| Responsible: | Csikósné Dr. Pap Andrea | | | | Teaching staff: | | Gröller György ,Tompos Péter | | | |
| Prerequisites: | | |  | | | | | | | |
| Contact hours per week: | | Lecture: | | Class discussion: | | Lab hours: 2 | | | Tutorial: | |
| Assessment and evaluation: | |  | | | | | | | | |
| **Subject description** | | | | | | | | | | |
| *Aims*: To develop laboratorial skills in the field of PCB technology. | | | | | | | | | | |
| *Topics to be covered:* | | | | | | | | | | |
| **Topics** | | | | | | | | **Week** | | **Lessons** |
| Introduction, working and safety rules | | | | | | | | 1 | | 3 |
| Manufacturing: Double side, through hole plated PCB. drilling, making hole conductive | | | | | | | | 2 | | 3 |
| Photolithography, galvanic plating | | | | | | | | 3 | | 3 |
| Solder mask preparation and patterning | | | | | | | | 4 | | 3 |
| Assembly processes, soldering TH and SM devices | | | | | | | | 5 | | 3 |
| Design: Circuit diagram I, borders, finding parts, choosing encapsulation. Block processes, | | | | | | | | 6 | | 3 |
| Circuit diagram II Drawing a schematic: finding parts, choosing package footprint, wiring, block operations. Board module, practise | | | | | | | | 7 | | 3 |
| Routing, placing components. Auto routing, manual routing | | | | | | | | 8 | | 3 |
| Design Rule Check (DRC), practising. Demo | | | | | | | | 9 | | 3 |
| **Assessment and evaluation**  Requirements of the signature:  A successful design work 50%  Report about PCB processes: 25%  Final test 25% | | | | | | | | | | |
| Suggested material <http://www.uni-obuda.hu/users/grollerg/Electronic-technology/labor/Double%20side%20PCB-labor1-4.pdf> | | | | | | | | | | |
| Comment: | | | | | | | | | | |