<table>
<tr><td>Module
MA-INF 1308</td><td colspan="4">Lab Algorithms for Chip Design</td></tr>
<tr><td>Workload
270 h</td><td>Credit points
9 CP</td><td>Duration
1 semester</td><td colspan="2">Frequency
every year</td></tr>
<tr><td>Module coordinator</td><td colspan="4">Prof. Dr. Jens Vygen</td></tr>
<tr><td>Lecturer(s)</td><td colspan="4">All lecturers of Discrete Mathematics</td></tr>
<tr><td>Classification</td><td colspan="2">Programme
M. Sc. Computer Science</td><td>Mode
Optional</td><td>Semester
3.</td></tr>
<tr><td>Technical skills</td><td colspan="4">Competence to implement algorithms for VLSI design, efficient handling of very large instances, testing, documentation. Advanced software techniques.</td></tr>
<tr><td>Soft skills</td><td colspan="4">Efficient implementation of complex algorithms, abstract thinking, modelling of optimization problem in VLSI design, documentation of source code</td></tr>
<tr><td>Contents</td><td colspan="4">A currently challenging problem will be chosen each semester. The precise task will be explained in a meeting in the previous semester.</td></tr>
<tr><td>Prerequisites</td><td colspan="4">Required: At least 3 of the following:
MA-INF 1102 – Combinatorial Optimization
MA-INF 1202 – Chip Design
MA-INF 1205 – Graduate Seminar Discrete Optimization
MA-INF 1208 – Applications of Cryptography</td></tr>
<tr><td>Format</td><td colspan="4"><table><tr><th>Teaching format</th><th>Group size</th><th>h/week</th><th>Workload[h]</th><th>CP</th></tr><tr><td>Lab</td><td>8</td><td>4</td><td>60 T / 210 S</td><td>9</td></tr></table>T = face-to-face teaching; S = independent study</td></tr>
<tr><td>Exam achievements</td><td colspan="4">Oral presentation, written report (graded)</td></tr>
<tr><td>Study achievements</td><td colspan="4">none (not graded)</td></tr>
<tr><td>Forms of media</td><td colspan="4"></td></tr>
<tr><td>Literature</td><td colspan="4">The topics and the relevant literature will be announced towards the end of the previous semester</td></tr>
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