# BAUINGENIEURWESEN
## MODULBESCHREIBUNG

| Course Details | | | | |
|---|---|---|---|---|
| **Code** | **Academic Year** | | | **Semester** |
| BAU456 | 4 | | | **Fall** |
| **Title** | **T** | **A** | **L** | **ECTS** |
| Construction Management II | 2 | 3 | | 6 |

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|---|---|---|---|---|---|---|
| **Language** | German | | | | | |
| **Level** | **Undergraduate** | ✓ | **Graduate** | | **Postgraduate** | |
| **Department / Program** | Civil Engineering | | | | | |
| **Forms of Teaching and Learning** | Face to face | | | | | |
| **Course Type** | **Compulsory** | | **Elective** | ✓ | | |
| **Objectives** | Teaching of fundamental knowledge about concrete and formwork construction.<br>Teaching of fundamental knowledge about construction scheduling.<br>Teaching of fundamental knowledge about construction site layout planning.<br>Teaching of knowledge about the fundamentals of tendering, cost calculation, awarding, competence in tendering, awarding and billing of simple construction projects. Knowledge of common cost calculation methods. Knowledge of VOB. | | | | | |
| **Content** | • Fundamentals of concrete and formwork construction<br>• Grundlagen der Bauablaufplanung<br>• Fundamentals of construction site layout planning<br>• Fundamentals of tendering of construction services according to VOB<br>• Fundamentals of cost calculation of construction services according to VOB<br>• Fundamentals of awarding of construction services according to VOB<br>• Fundamentals of billing of construction services according to VOB<br>• Tendering and awarding of a simple construction project<br>• Cost calculation of a simple construction project<br>• Construction scheduling based on cost calculation | | | | | |
| **Prerequisites** | Modul “Baubetrieb I“ | | | | | |
| **Coordinator** | Prof. Dr.-Ing. Ulrich Neuhof | | | | | |
| **Lecturer(s)** | Prof. Dr.-Ing. Ulrich Neuhof | | | | | |
| **Assistant(s)** | | | | | | |
| **Work Placement** | | | | | | |

**Recommended or Required Reading**

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| **Books / Lecture Notes** | Lecture notes and materials by Prof. Neuhof, VOB current edition, Kalkulation von Baupreisen 13th Edition, Drees, Krauß, Berthold, Verlag Bauwerk Beuth Grundlagen der Baubetriebslehre Vol. 1-3; Fritz Berner, Bernd Kochendörfer, Rainer Schach, Teubner, Product documentation from formwork manufacturers, Schach, Otto Baustelleneinrichtungsplanung 4th Edition, Malpricht, Rupp Schalungsplanung im Baubetrieb 2nd Edition, Krause, Ulke, Ferger Zahlentafel für den Baubetrieb 10th Edition |
| **Other Sources** | |
| **Additional Course Material** | |
| **Documents** | |
| **Assignments** | |
| **Exams** | Ganzheitliches Projekt „Stahlbetonbauwerk“ mit Abschlusskolloquium |

| **Course Composition** | | |
|---|---|---|
| **Mathematics and Basic Sciences** | 10 | % |
| **Engineering** | 35 | % |
| **Engineering Design** | 5 | % |
| **Social Sciences** | | % |
| **Educational Sciences** | | % |
| **Natural Sciences** | | % |
| **Health Sciences** | | % |
| **Expert Knowledge** | 50 | % |

| **Assessment** | | |
|---|---|---|
| **Activity** | **Count** | **Percentage (%)** |
| **Midterm Exam** | | |
| **Quiz** | | |
| **Assignments** | | |
| **Attendance** | | |
| **Recitations** | | |
| **Projects** | 1 | 70 |
| **Final Exam** | 1 | 30 |
| | **Total** | **100** |

| **ECTS Points and Work Load** | | | |
|---|---|---|---|
| **Activity** | **Count** | **Duration** | **Work Load (Hours)** |
| **Lectures** | 14 | 2 | 28 |
| **Self-Study** | 13 | 3 | 39 |
| **Assignments** | 0 | 0 | 0 |
| **Presentation / Seminar Preparation** | 1 | 9 | 9 |
| **Midterm Exam** | | | |

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|---|---|---|---|
| **Recitations** | 14 | 3 | 42 |
| **Laboratory** | 0 | 0 | 0 |
| **Projects** | 10 | 5 | 50 |
| **Final Exam** | | | |
| | | **Total Work Load** | **168** |
| | | **ECTS Punkte** (Total Work Load /Hour) | **6** |

| **Learning Outcomes** | |
|---|---|
| **1** | Grundlagen des Schalungsbaus |
| **2** | Fundamentals of construction scheduling |
| **3** | Fundamentals of construction site layout planning |
| **4** | Grundlagen der Bauwirtschaft, Projektbeteiligte und Grundlagen der VOB |
| **5** | Fundamentals of tendering of construction services |
| **6** | Preparation of bills of quantities and quantity calculations according to VOB |
| **7** | Fundamentals of cost calculation of construction services Part 1 |
| **8** | Fundamentals of cost calculation of construction services Part 2 |
| **9** | Fundamentals of awarding of construction services |
| **10** | Fundamentals of billing of construction services |
| **11** | Tendering, awarding and billing of construction services Part 1 |
| **12** | Tendering, awarding and billing of construction services Part 2 |
| **13** | Construction scheduling based on cost calculation |
| **14** | Digital tools for construction management applications |
| **15** | |
| **16** | |

| **Weekly Content** | |
|---|---|
| **1** | **Topic Area CM2:**<br>Grundlagen des Schalungsbaus |
| **2** | **Themenfeld BB2:**<br>Fundamentals of construction scheduling |
| **3** | **Themenfeld BB2:**<br>Fundamentals of construction site layout planning |
| **4** | **Themenfeld BB2:**<br>**Teil 4a:** Grundlagen der Bauwirtschaft und des Baugewerbes<br>**Teil 4b:** Project participants in construction services<br>**Teil 4c:** Einführung in die VOB Teile A, B und C |
| **5** | **Topic Area CM2:**<br>**Teil 5a:** Fundamentals of tendering of construction services according to BGB and VOB and quantity calculation<br>**Teil 5b:** Rechtliche framework conditions of tendering according to VOB |

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|---|---|
| **6** | **Topic Area CM2:**<br>**Teil 6:** Preparation of bills of quantities and project work |
| **7** | **Topic Area CM2:**<br>**Teil e 7 und 8:** Fundamentals of cost calculation of construction services and project work |
| **8** | **No lecture due to midterm examinations** |
| **9** | **Topic Area CM2:**<br>**Teil 9 und 10:** Fundamentals of awarding and billing of construction services and project work |
| **10** | **Topic Area CM2:**<br>**Teil 11:** Tendering**,** Awarding and billing of construction services and project work |
| **11** | **Topic Area CM2:**<br>**Teil 12**: Fundamentals of billing of construction services and project work |
| **12** | **Topic Area CM2:**<br>**Teil 13 und 14:** Construction scheduling based on cost calculation, project submission and digital tools |
| **13** | **Topic Area CM2:**<br>Preparation of presentation and colloquium |
| **14** | **Topic Area CM2:**<br>Project presentation with colloquium |
| | |

**Contribution of Learning Outcomes to Program Objectives (1-5)**

| | P1 | P2 | P3 | P4 | P5 | P6 | P7 |
|---|---|---|---|---|---|---|---|
| **1** | 3 | 2 | 4 | 5 | 5 | 4 | 5 |
| **2** | 3 | 2 | 5 | 5 | 5 | 5 | 5 |
| **3** | 3 | 2 | 5 | 5 | 5 | 5 | 4 |
| **4** | 3 | 2 | 4 | 5 | 5 | 4 | 5 |
| **5** | 3 | 2 | 4 | 4 | 4 | 4 | 4 |
| **6** | 3 | 2 | 5 | 5 | 5 | 5 | 5 |
| **7** | 3 | 2 | 4 | 4 | 4 | 4 | 4 |
| **8** | 3 | 2 | 5 | 5 | 5 | 5 | 5 |
| **9** | 3 | 2 | 5 | 5 | 4 | 5 | 5 |
| **10** | 3 | 2 | 5 | 4 | 5 | 5 | 4 |
| **11** | 3 | 2 | 5 | 5 | 5 | 5 | 5 |
| **12** | 3 | 2 | 5 | 5 | 5 | 5 | 5 |
| **13** | 3 | 2 | 4 | 4 | 4 | 4 | 4 |
| **14** | 3 | 2 | 5 | 5 | 5 | 5 | 5 |

**Beitragsgrad:** 1: Low 2: Low-intermediate 3: Intermediate 4: High 5: Very High

https://obs.tau.edu.tr/oibs/bologna/progLearnOutcomes.aspx?lang=en&curSunit=5728

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| **Compiled by:** | Prof. Dr.-Ing. Ulrich Neuhof |
| **Date of Compilation:** | 03.03.2026 |