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| Module name | **Hydrological modelling** |
| Module number | CMS-TRK-EM1 |
| Senior Lecturer | Prof. Dr. Niels Schütze<br>niels.schuetze@tu-dresden.de |
| Qualification objectives | Students can describe the methods of hydrological processes with appropriate models. Furthermore, students are able to independently create, build and operate hydrological models and to critically and objectively assess their results. |
| Contents | The content of the module is the basis for the possibilities and constraints of mapping hydrological processes with different model types, creating, parametrising and applying abstract models, objectively assessing uncertainties and critically considering model results. |
| Forms of teaching and learning | The module includes lectures of 2 SWS, exercises of 2 SWS and self-study. The teaching language of lectures and exercises may be German or English and will be specifically determined by the teacher at the beginning of each semester and announced in the usual manner. |
| Eligibility for participation | Knowledge of higher mathematics, such as differential calculation, partial differential equations, integral calculation and linear algebra at bachelor level, is required. |
| Usability | In the Masters Course Computational Modeling and Simulation, the module is an optional module in the Track Computational Environmental Science and Engineering, to be selected in accordance with Annex 2 to the Specific Examination Regulations. The module cannot be chosen in the Master's Course Computational Modeling and Simulation if this or a module with substantially the same content from a Course with which the entry conditions under § 3 of the Studienordnung have been met has already been completed. The module provides the pre-requisites for the modules it designates under the pre-requisites for participation. |
| Conditions for the award of credits | Credits are awarded when the module test is passed. The module test consists of a portfolio of 50 hours. The language of the exam will be German or English, at the student's choice. |
| Credits and marks | The module allows 5 credit points to be obtained. The module score corresponds to the test performance score. |
| Frequency of the module | The module is offered every winter semester. |
| Workload | The total workload is 150 hours. |
| Duration of the module | The module covers 1 semester. |