

Course title	<i>Ice Slurry Technology</i>
Course code	<i>M8670</i>
Module coordinator	<i>Miriam Heinrich</i>
Lecturer	<i>Prof. Dr. Michael Kauffeld</i>
Level of course	<i>Master</i>
Recommended prerequisites	<i>Thermodynamics, Fluid dynamics, Refrigeration technology 1</i>
Type of course	<i>Lecture</i>
Weekly lecture hours (SWS)	<i>2</i>
ECTS credits	<i>3</i>
Workload	<i>in total 90h, 45h course attendance, 45h self-study</i>
Assessment (grading; pass/fail)	<i>graded</i>
Regular cycle	<i>Each semester</i>
Language of instruction	<i>English</i>
Contents:	<i>Ice creation and thermo-physical properties of ice slurries and other characteristics, fluid dynamics and thermodynamics of ice slurry, heat transfer, ice slurry production, different ice slurry generators, transport of ice slurries in piping systems, storing/melting and mixing, melting ice slurry in plate heat exchangers and air coolers, direct contact chilling and freezing of foods in ice slurries, the control of ice slurry systems, present and future applications in comfort cooling, food processing and other areas.</i>
Learning outcome (competencies):	<p><i>After having successfully completed the course, the students should be able to</i></p> <ul style="list-style-type: none"> - <i>name and describe the essential tasks of ice slurry systems</i> - <i>name the advantages and disadvantages of the individual ice slurry production methods</i> - <i>assess simple ice slurry systems and to identify suitable applications</i>
Teaching methods	<input checked="" type="checkbox"/> <i>Lecture</i> <input type="checkbox"/> <i>Group work</i> <input type="checkbox"/> <i>Exercises</i> <input type="checkbox"/> <i>Simulation</i> <input type="checkbox"/> <i>Video feedback</i> <input type="checkbox"/> <i>Others: Please click here for inserting text</i>
Assessment methods	<i>Written exam – closed books (60 minutes)</i>
Recommended reading	<i>Kauffeld M., Kawaji M., Egolf P. W.: Handbook on Ice Slurries: Fundamentals and Engineering. IIR 2005</i>
Additional information	<i>The course can be supplemented by projects in our advanced ice slurry research lab. We always have interesting projects of varying length and knowledge level</i>
Recognition of credits	<i>Klicken oder tippen Sie hier, um Text einzugeben.</i>