

<b>Department</b>	04 Electrical Engineering and Information Technology
<b>Course title</b>	<b>Realtime Operating Systems</b>
<b>Course number</b>	EL 723
<b>Hours per week (SWS)</b>	4
<b>Number of ECTS credits</b>	5
<b>Course objective</b>	After attending this module, the students are able to explain and assess the use, structure and functionality of real-time operating systems and to create simple, real-time-capable, application-oriented software in real-time systems. They can also assess and use concepts and methods for checking real-time conditions in so-called real-time programming. The students can develop simple real-time capable concurrent tasks/threads, which e.g. also use common inter-task communication tools and task synchronization tools. They can carry out simple reliability calculations and safety considerations.
<b>Prerequisites</b>	Recommended: Courses about Technical Computer Science 1-3 (the course Realtime Operating Systems is for students in the 6th or 7th semester)
<b>Recommended reading</b>	<a href="https://books.google.de/books/about/Modern_Operating_Systems_Global_Edition.html?id=cHa2EAAAQBAJ&amp;source=kp_book_description&amp;redir_esc=y">https://books.google.de/books/about/Modern_Operating_Systems_Global_Edition.html?id=cHa2EAAAQBAJ&amp;source=kp_book_description&amp;redir_esc=y</a> <a href="https://books.google.de/books?id=DMxe9AI4-9gC&amp;printsec=frontcover&amp;dq=computer+organization+and+design&amp;hl=en&amp;sa=X&amp;redir_esc=y#v=onepage&amp;q=computer%20organization%20and%20design&amp;f=false">https://books.google.de/books?id=DMxe9AI4-9gC&amp;printsec=frontcover&amp;dq=computer+organization+and+design&amp;hl=en&amp;sa=X&amp;redir_esc=y#v=onepage&amp;q=computer%20organization%20and%20design&amp;f=false</a>
<b>Teaching methods</b>	Seminar-style teaching with integrated internship (3 SU + 1 internship)
<b>Assessment methods</b>	Written exam 90 min + voluntary exercise to improve the overall mark (max. 30% bonus)
<b>Language of instruction</b>	English
<b>Name of lecturer</b>	Prof. Dr. Felix Miller
<b>Email</b>	<a href="mailto:felix.miller@hm.edu">felix.miller@hm.edu</a>
<b>Link</b>	<a href="https://www.ee.hm.edu/fk04/profs/miller.de.html">https://www.ee.hm.edu/fk04/profs/miller.de.html</a>
<b>Course content</b>	See handbook for the master program "Elektrotechnik", <a href="https://mediapool.hm.edu/media/fk04/fk04_lokal/studienplan__modulhandbuch__neu_/modulhandbuecher/modulhandbuecher_ss_2023/2023_03_21_Modulhandbuch-EI_SoSe2023.pdf">https://mediapool.hm.edu/media/fk04/fk04_lokal/studienplan__modulhandbuch__neu_/modulhandbuecher/modulhandbuecher_ss_2023/2023_03_21_Modulhandbuch-EI_SoSe2023.pdf</a>
<b>Remarks</b>	