

**Dados de identificação**

Disciplina	Real Time Svstems
Período Letivo	2021/1
Professor Responsável	Edison Pignaton de Freitas
Sala	CMP-158
Carga horária (horas)	60 hs

**Dados adicionais**

Data efetiva de início	(Art. 9o, §1o - O plano de ensino adaptado deverá refletir, no que couber, as datas efetivas de início e realização das atividades.)
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**Súmula**

The course presents the basic concepts of real time systems and their applications. Besides the (Art. 5o, §1o - A súmula, os conteúdos a serem abordados e os objetivos de aprendizagem não poderão ser modificados.)

**Objetivos**

Differences between real time and non-real time systems  
 Real time operating systems  
 Real time applications  
 Software engineering for real time systems  
 Real time programming  
 Real time scheduling  
 Advances topics involving real time systems  
 (Art. 5o, §1o - A súmula, os conteúdos a serem abordados e os objetivos de aprendizagem não poderão ser modificados.)

**Conteúdo Programático**

Título	Conteúdo	Semana	Formato
Introduction	Real Time Systems - Basic concepts, main characteristics and related topics	1	Realizado remotamente
Real Time Systems Architecture	Structure, organization and abstract models	2	Realizado remotamente
Discussion	Discussion about the topics for the final project	3	Realizado remotamente
Real Time Software Engineering	Requirements Analysis and Specification, Design, Declarative Specification, State Machine Systems	4	Realizado remotamente
Project Presentation 1 - Topic Selection	Project Seminar: Presentation of topic selected for the project	5	Realizado remotamente
Scientific paper methodology	Methodology to write a scientific paper	6	Realizado remotamente
Project Presentation 2 - Related Work	Project Seminar: Seminar about related work on the selected topic for the project	7	Realizado remotamente
Linear Time Logics – Real Time Logics	Real Time Systems Specification using Linear Time Logics and Real Time Logics	8	Realizado remotamente
Project Presentation 3 - Proposal	Project Seminar: problem statement and overview of the proposed solution	9	Realizado remotamente
Real Time Systems Scheduling 1	Rate monotonic, Early Deadline First	10	Realizado remotamente
Project Presentation 4 - Detailed Solution	Project Seminar: details on the proposed solution	11	Realizado remotamente
Real Time Systems Scheduling 2	Priority Inversion Problem and Solutions	12	Realizado remotamente
Project Presentation 5 - Partial Results	Project Seminar: Partial Results	13	Realizado remotamente
Project Presentation 6 - Final Reevaluation	Project Seminar: Complete presentation of the performed project for final evaluation Reevaluation of uncompleted project or projects with insufficient results	14 15	Realizado remotamente Realizado remotamente

(Art. 5o, §1o - A súmula, os conteúdos a serem abordados e os objetivos de aprendizagem não poderão ser modificados.)

Ajustar a Selecionar o formato.

**Metodologia**

**Estratégias didáticas em atividades remotas**  
 The video-classes will be available in the moodle; The seminars will be, preferably, presented online (synchronously), but the students can also record it and send the link to the professor. The professor will be available during the period of the classes to solve problems and doubts online. The students can also use email or the Moodle's forum for this purpose.  
 (Art. 11 - Os Planos de Ensino adaptados deverão prever atividades síncronas e assíncronas. §1o – As atividades síncronas que visem

**Estratégias didáticas em atividades presenciais**  
 There is no in person (presential) activity.

**Recursos disponibilizados**  
 All the activities and all the instructions will be available in the Moodle INF. Any component external to Moodle INF will clearly explained in the instructions available in the Moodle.  
 (Art. 10 - Os planos de ensino adaptados deverão prever obrigatoriamente a utilização de um dos Ambientes Virtuais de Aprendizagem (AVAs)

**Recursos computacionais**  
 To follow the activities, it is necessary to have internet access. Synchronous activities can be performed by means of smartphones or computers with camera and microphone.

**Carga Horária**

Teórica	60h
Prática	0h

**Experiências de****Crítérios de Avaliação**

To be approved, the student needs to reach the average grade of 6.0 in 5 project presentation seminars and in the evaluation of the final evaluation of the project. In case she/he does not achieve this grade, there is a second chance for presenting again the final seminar in the last week of the course. In this case, the student needs to reach the grade 6.0 in this presentation to be approved.

The students can present the 5 seminars and final project seminars synchronous online in the class of the correspondent week, or post in Moodle INF the record of the presentation during that week. The same holds for the second chance final evaluation (Reevaluation) for those that did not achieve the grade 6.0 in the average of the 5 project presentation and in the final evaluation.  
 remota e assíncrona. §1º - A metodologia avaliativa remota a ser utilizada deve estar detalhada no Plano de Ensino adaptado. §2º - No caso de

**Atividades de Recuperação Previstas**

The second chance final evaluation (Reevaluation) for those that did not achieve the grade 6.0 in the average of the 5 project presentation and in the final evaluation occurs in the last week in the same model of the other seminars.

**Bibliografia**

Sem alterações  
 (Lista com novas bibliografias, caso haja alterações. Onde possível incluir referências a materiais público ou ser disponibilizada pelo docente.)