

Dados de identificação			
<i>Disciplina</i>	Computer Networks		
<i>Período Letivo</i>	2020/1		
<i>Professor Responsável</i>	Luciano Paschoal Gaspar		
<i>Síla</i>	CMP 182		
<i>Carga horária (horas)</i>	60		
Dados adicionais			
<i>Data efetiva de início</i>	August 2nd, 2021 <small>(Art. 9o, §1o - O plano de ensino adaptado deverá refletir, no que couber, as datas efetivas de início e realização das atividades.)</small>		
Súmula			
Overview of computer networks and the Internet. Application layer. Transport layer. Network layer. Link layer and Local Area Networks. Wireless and mobile networks. <small>(Art. 5o, §1o - A súmula, os conteúdos a serem abordados e os objetivos de aprendizagem não poderão ser modificados.)</small>			
Objetivos			
Presenting fundamental concepts, techniques and protocols – from the application layer down to the link layer – on top of which modern computer networks, and particularly the Internet, work. Emphasis will be given to more advanced topics, which are only partially (or not) covered by CS undergraduate-level courses. <small>(Art. 5o, §1o - A súmula, os conteúdos a serem abordados e os objetivos de aprendizagem não poderão ser modificados.)</small>			
Conteúdo Programático			
Título	Conteúdo	Semana	Formato
Link layer	Link-layer services and technologies; Link virtualization: MPLS, traffic engineering and virtual private networks; Wireless and mobile networks.	1-2	Remoto
Network layer	IPv6 and transition efforts from IPv4 to IPv6; Routing in the Internet: Inter-AS routing and routing architectures; Future Internet, Software-Defined Networks, and Network Function Virtualization; Quality of Service.	3-7	Remoto
Transport layer	Connection-Oriented Transport: TCP; Principles of congestion control; TCP congestion control and its “flavors”.	8-11	Remoto
Application layer	HTTP 2.0; Multimedia networking, including VoIP, streaming and interactive applications; Peer-to-Peer applications. <small>(Art. 5o, §1o - A súmula, os conteúdos a serem abordados e os objetivos de aprendizagem não poderão ser modificados.)</small>	12-15	Remoto
		Ajustar a	Selecionar
Metodologia			
<i>Estratégias didáticas em atividades remotas</i>	Classes will be taught synchronously, using Zoom/MConf, at the usual times. They will be recorded and then made available through Moodle. Classes will be complemented with live discussions (and through the Moodle forums), resolution of some essential exercises, and an indication of readings. Presence control will be carried out via the delivery (by the students) of one/two activities to be solved per class plus participation in all asynchronous activities. <small>(Art. 11 - Os Planos de Ensino adaptados poderão prever atividades síncronas e assíncronas. §1o – As atividades síncronas que visem</small>		
<i>Estratégias didáticas em atividades presenciais</i>	We will not organize any face-to-face activity.		
<i>Recursos disponibilizados</i>	Classes will be recorded and then made available through Moodle. Other resources such as suggested readings, exercises, etc., will also be available through Moodle. <small>(Art. 10 - Os planos de ensino adaptados deverão prever obrigatoriamente a utilização de um dos Ambientes Virtuais de Aprendizagem (AVAs)</small>		
<i>Recursos computacionais</i>	To attend the classes, the students will need to have access to a computer/tablet (or even a smartphone) connected to the Internet (> 5 Mbps), a microphone, earphones, and, if possible, a webcam. In addition, the device is required to run a web browser (preferably Chrome or Firefox) and a PDF reader.		
Carga Horária			
<i>Teórica</i>	60h		
<i>Prática</i>	0h		
Experiências de			
Critérios de Avaliação			
Evaluation will be based on the following criteria: attendance and participation in discussions (10%), homework assignments (10%), an individual student project (40%), and an online final exam (40%). The conversion of the weighted average to grades will be as follows: 9.0 <= average <= 10 -> A; 7.5 <= average < 9.0 -> B; 6.0 <= average < 7.5 -> C; average < 6.0 -> D. In case a student faces Internet connectivity problem during an exam, the exam (to this student) will be rescheduled to a new date. <small>forma remota e assíncrona. §1º - A metodologia avaliativa remota a ser utilizada deve estar detalhada no Plano de Ensino adaptado. §2º - No</small>			
Atividades de Recuperação Previstas			
If necessary, we will schedule a new exam (covering all course content) for those students who do not reach an average grade of 6,0. These students will need to be approved with a grade higher than or equal to 6,0 to be approved in the course (with C).			
Bibliografia			
No alterations. <small>(Lista com novas bibliografias, caso haja alterações. Onde possível incluir referências a materiais domínio público ou ser disponibilizada pelo docente.)</small>			