

Course Title	Ergonomics and Infection Control in Dental Practice				
Course Code	DES390				
Course Type	Compulsory				
Level	Bachelor of Dentistry				
Year / Semester	3 <sup>rd</sup> year / 6 <sup>th</sup> semester				
Teacher's Name	TBA				
ECTS	3	Lectures / week	2 hrs / 13 weeks + exam week	Laboratories / week	2 hrs /13 weeks
Course Purpose and Objectives	<p>This Course provides students with the disciplines of Infection control measures and Ergonomics in dental care</p> <p>Providing dental healthcare it is imperative that a series of measures be applied to prevent the transmission of infections among patients and dental personnel.</p> <p>The protection of the general health of dental patients as well as any medical and auxiliary staff working in the healthcare settings (dental practice, clinic, scrub nurses, cleaning services) is a basic parameter in dental healthcare provision.</p> <p>During dental treatment there is a transmission risk of various diseases caused by microbial strains such as herpes simplex viruses (HSV I &amp; HSV II), hepatitis A,B,C and D viruses (HAV, HBV, HCV, HDV), cytomegalovirus (CMV), tuberculosis bacterium (TB), various streptococcus and staphylococcus viruses, Candida alb cans and the strains of the acquired human immunodeficiency virus (HIV I &amp; HIV II). Infections can be transmitted in dental practice mainly through immediate contact with blood, saliva and possibly other secretions or through contaminated or inadequately disinfected and sterilized instruments.</p> <p>In order for the patients' and dental personnel's health to be protected, a series of basic, but also as the case may be, measures are recommended. The basic measures are: a) single-use gloves, b) mask, c) protective goggles, d) appropriate medical clothing, e) surface covering, f) single-use instruments, g) instrument sterilization, h) surface and flooring sterilization, i) hand washing, j) injury prevention and, finally, vaccination and immunization (when possible) of dental personnel.</p>				

Course presentations targets:

Upon successful completion of this course students should be able to:

Protect both themselves, the dental personnel and the patients from Hepatitis B, Hepatitis C, HIV, Tuberculosis, Legionellosis, Cytomegalovirus, Herpes I and II and a wide variety of airborne diseases.

Introduce students to the current terminology related to cleaning and decontamination procedures.

Provide knowledge and skills as an introduction to core practices within clinical dentistry relevant to perform both intramural/academic and private dental therapy & dental hygiene

Introduce students to the transmissible diseases, related to the dental office/treatment such as Hepatitis

Introduce students to the current terminology related to disinfection materials and procedures.

Make the students familiar to the current terminology related to sterilization procedures.

Provide knowledge and skills as an introduction to core practices related to hand cleaning techniques and materials.

Provide knowledge and skills as an introduction to core practices related to critical, semicritical and non critical surfaces' cleaning techniques and materials.

Provide knowledge and skills as an introduction to core practices related to critical, semicritical and non-critical surfaces disinfection techniques and materials.

Provide knowledge and skills as an introduction to core practices related to critical and semicritical instruments, apparatus and tools' sterilization techniques and materials.

Introduce students, step-by-step, to the basic knowledge related to the use of electronic, mechanical, chemical and biological indicators of the quality of sterilization, with both dry heat and steam autoclaves.

Introduce students to the currently existing policies and protocols related to the hazardous waste management and disposals.

	<p>Inform students to the currently existing requirements related to the use, handling and disposal of mercury containing materials, the installation of amalgam separators and the proper disposal of toxic waste.</p> <p>Provide students all basic knowledge related to the handling of sharps, protection from injuries and Post Exposure Prophylaxis protocols.</p> <p>Provide knowledge and skills as an introduction to core practices, related to management of the indoor quality of air of the dental office.</p> <p>Provide knowledge and skills as an introduction to the quality of water used inside the dental office and the dental devices.</p> <p>Prepare students to perceive the possibilities of cooperation with the dental personnel (chairside dental assistants and Hygienists) as head and responsible for the Dental team, performing in dental installations.</p> <p>Prepare students to design or cooperate with health installations experts, in order to construct an ergonomic practice, fulfilling current health and safety requirements.</p>
<p>Learning Outcomes</p>	<p>Upon successful completion of this course students should be able to:</p> <ul style="list-style-type: none"> <li>• Describe the core practices within clinical dentistry relevant to perform both intramural/academic and private dental therapy &amp; dental hygiene.</li> <li>• Discuss the significance of minimization of the transmission of diseases, related to the dental office/treatment such as Hepatitis A, Hepatitis B, Hepatitis C, HIV, Tuberculosis, Legionellosis, Cytomegalovirus, Herpes I and II.</li> <li>• Use the current terminology related to cleaning and decontamination procedures, disinfection materials and procedures and sterilization procedures.</li> <li>• To describe and apply core practices related to hand cleaning techniques and materials, use materials and perform core practices, related to critical, semicritical and non critical surfaces'.</li> </ul>

	<ul style="list-style-type: none"> <li>• Describe the use of electronic, mechanical, chemical and biological indicators of the quality of sterilization, with both dry heat and steam autoclaves.</li> <li>• Describe and analyze the currently existing policies and protocols related to the hazardous waste management and disposals, and enforce the currently existing requirements related to the use, handling and disposal of mercury containing materials, the installation of amalgam separators and the proper disposal of toxic waste.</li> <li>• Analyze and estimate the cooperation with the salaried dental personnel (chairside Dental Assistants and Hygienists) as head and responsible for the Dental team, performing in dental installations.</li> <li>• Monitor and evaluate evidence in a critical and scientific manner to support professional practice and use information technology appropriately as an essential resource for modern oral health therapy / dental practice.</li> <li>• Describe the basic principles of office construction and design such as office spacing, units placement and arrangement, flooring, lighting, sewing, indoor air quality and air conditioning.</li> <li>• Perform every current technique related to 4 or 6 hands dentistry and cooperates productively and safely with other dentists or chairside dental assistants.</li> <li>• To evaluate the potentiality and the abilities of every hand instrument, rotative instruments, peripheral devices of current technology and adapt them to the needs of every therapeutic protocol.</li> </ul>		
Prerequisites	None	Co-requisites	None
Course Content	<p>In that regard, students will familiarize themselves with the following Modules:</p> <ul style="list-style-type: none"> <li>• Significance of minimization of the transmission of diseases, related to the dental office/treatment such as Hepatitis A, Hepatitis B, Hepatitis C, HIV, Tuberculosis, Legionellosis, Cytomegalovirus, Herpes I and II.</li> <li>• Core practices related to hand cleaning techniques and materials, and practices, related to critical, semicritical and non-critical surfaces', critical and semicritical instruments, apparatus and tools' sterilization techniques and materials.</li> <li>• Use of electronic, mechanical, chemical and biological indicators of the quality of sterilization, with both dry heat and steam autoclaves.</li> </ul>		

	<ul style="list-style-type: none"> <li>• Presentations dealing with the currently existing policies and protocols related to the hazardous waste management and disposals.</li> <li>• Presentations dealing with the currently existing requirements related to the use, handling and disposal of mercury containing materials, the installation of amalgam separators and the proper disposal of toxic waste.</li> <li>• Presentations dealing with the necessary practices, precautions and reactions related to the handling of sharps, protection from injuries and Post Exposure Prophylaxis protocols and to management of the indoor quality of air of the dental office.</li> <li>• Perform analysis and data interpretation related to the quality of water used inside the dental office and the dental devices.</li> </ul>								
Teaching Methodology	Face-to-face lectures, Laboratory presentations and hands on								
Bibliography	<p>Miller C, Palenik C. Infection Control and Management of Hazardous Materials for the Dental Team. St. Louis: Mosby, 2017.</p> <p>Glick M. Dental Management of Patients with HIV. Chicago: Quintessence Publishing, 1994.</p> <p>Bridges G. Dental Reception and Practice Management. Copenhagen: Blackwell Munksgaard, 2006.</p> <p>Wilson J. Infection Control in Clinical Practice. St. Louis: Elsevier, 2006.</p> <p>Martin M, Fulford M, Preston T. Infection Control for the Dental Team. Chicago: Quintessence Publishing, 2009.</p> <p>Wood P. Cross Infection Control in Dentistry: A Practical Illustrated Guide. London: Wolfe Mosby, 1992.</p>								
Assessment	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 70%;">Final Examination</td> <td style="width: 30%; text-align: center;">60%</td> </tr> <tr> <td>Laboratory / Clinical Work / Oral presentations</td> <td style="text-align: center;">30%</td> </tr> <tr> <td>Participation and attendance</td> <td style="text-align: center;">10%</td> </tr> <tr> <td>Total</td> <td style="text-align: center;">100%</td> </tr> </table>	Final Examination	60%	Laboratory / Clinical Work / Oral presentations	30%	Participation and attendance	10%	Total	100%
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Language	English								