

OPTO 327, Contact Lenses I

Units: 1+1= 2 Credit Hours

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Recommended textbooks:

- 1- Contact lenses by A. Phillips and L. Speedwell, 2006.
- 2- Clinical Manual of contact lenses by E. Bennett 1994 and 2009
- 3- The Contact Lens manual by A. Gasson, 2010.

Main Topics of the course:

- 1- Soft CL design.
- 2- Indications and contraindications.
- 3- History of Soft CLs.
- 4- Soft CL materials.
- 5- Manufacturing methods.
- 6- Fitting procedure.
- 7- Lens selection and assessment.
- 8- Care system and patient education.

weekly Lectures

Week	Topic in details	Notes
1	<p style="text-align: center;">History of Contact Lenses.</p> <ul style="list-style-type: none"> - Early History (1500s) - Contact Lens pioneers - Development of the Contact Lenses during the period of 1930s to 1960s and 1970s to 2015 	
2	<p style="text-align: center;">Introduction to contact lenses 1</p> <ul style="list-style-type: none"> - What is contact lens? - Revision of corneal anatomy and physiology. - Contact lens design and optics. - Terminology Related to Soft Contact Lens Parameters. 	
3	<p style="text-align: center;">Soft contact lens materials</p> <ul style="list-style-type: none"> - Properties of the Ideal Contact Lens Material - Water content influences - Ionic and Non-Ionic Materials - Oxygen permeability and transmissibility of soft Lenses - Advantages and Disadvantages of Different Materials - Hydrogel and Silicone Contact Lenses - Biocompatibility of CLs - Classification of Wear Modalities 	
4	<p style="text-align: center;">Manufacturing Methods of CLs</p> <ul style="list-style-type: none"> - Molding. - Spin-casting - Lathing. 	
5	<p style="text-align: center;">Fitting procedure of soft CLs</p> <ul style="list-style-type: none"> - Patient screening and case history. - Preliminary Examination and Measurements <ul style="list-style-type: none"> • Slit-lamp examination of the anterior segment (Eyelids, Conjunctiva, Cornea, Iris and limbus) • Measurement of ocular dimensions • Assessment of the tears • Spectacle refraction 	2

6	Mid-term Exam 1 and Practical Exam 1	
7	<p style="text-align: center;">Soft CL Selection</p> <ul style="list-style-type: none"> - Base Curve - Lens Power. - Total Diameter. - Lens materials and lens wear modalities 	
8	<p style="text-align: center;">Soft CLs insertion and removal and verification methods</p> <p><u>Assessment of soft CLs fitting.</u></p> <ul style="list-style-type: none"> • Centration. • Movement. • Tightness. • Corneal coverage. • Comfort. • VA. • Final Lens Order 	
9	<p style="text-align: center;">Care system and patient education</p> <ul style="list-style-type: none"> - Contact lens solutions and accessories. - Self hygiene. - Lens hygiene. - Lens insertion and removal by patient. - Normal and abnormal signs & symptoms of CL wear. 	
10	<p style="text-align: center;">After Care 1</p> <ul style="list-style-type: none"> - After care procedure (History, fitting assessment, Over-Refraction...etc) - Slit- lamp examination (Corneal staining, lid eversion..etc) - Follow up schedule.- - Complications 	
11	Mid-term Exam 2	
12	<p style="text-align: center;">Indications and contraindications for Soft CL wear 1</p> <ul style="list-style-type: none"> - Visual indications. 	

	<ul style="list-style-type: none"> - Occupational indications - Therapeutic indications. - Cosmetic reasons. - Contraindications. 	
13	Revision	
14	Practical Exam 2	
15	Final exam	

Course Assessment methods

Task/ Exam	Marks %
Mid-Term Theoretical Exam 1	15
Mid-Term Theoretical Exam 2	15
Mid-Term Practical Exam1	7.5
Mid-Term Practical Exam2	7.5
Final Practical Exam	15
Final Exam	40
Total	100

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