Syllabus

**Imaging methods in Orthodontics - 97999**

*Last update 16-12-2014*

**HU Credits:** 5

**Degree/Cycle:** 2nd degree (Master)

**Responsible Department:** bio-medical sciences in dentistry

**Academic year:** 1

**Semester:** Yearly

**Teaching Languages:** English

**Campus:** Ein Karem

**Course/Module Coordinator:** Dr Abed yossi

**Coordinator Email:** abedy@cc.huji.ac.il

**Coordinator Office Hours:** Monday and Tuesday, by appointment

**Teaching Staff:**
  - Dr. Yossi Abed
  - Prof Ilana Brin
Course/Module description:
This course provides a broad insight into both the theoretical and the practical aspects of cephalometrics and imaging as essential tools in orthodontic diagnosis and follow-up.

Course/Module aims:
To present the basics of cephalometrics and other modern imaging techniques.
To discuss and practice a variety of cephalometric analyses.

Learning outcomes - On successful completion of this module, students should be able to:
Make an orthodontic diagnosis based on cephalometrics and other imaging systems.

Attendance requirements(%):
100%

Teaching arrangement and method of instruction: frontal lectures and seminars and practical sessions. Reading assignments for each seminar session is to provide background information for class discussions related to the scheduled topics.

Course/Module Content:
Prof Ben Bassat & Brin Introduction & Landmark identification- tracing exercise (1)
20/10/14 Mon 11:15-14:00
2 2 Prof Brin Landmark identification and tracing exercise (1) 23/10/14 Thur 9:15-12:00
3 3 Dr. Abed Steiner analysis 27/10/14 Mon 13:15-16:00
4 4 Dr. O. Yitschaky Downs analysis 03/11/14 Mon 11:15-14:00
5 5 Dr. Abed Sassouni analysis including Proportional Analysis 10/11/14 Mon 8:15-11:00
6 6 Dr. Shipperman Wylie, Tweed, Wits analyses 11/11/14 Tues 10:15-13:00
7 8 Dr. Friedlander Pathology in cephalometric radiographs 16/11/14 Sun
13:30-16:00 or Wed 19/11/14
8  7 Dr. Friedman Ricketts analysis including A-P analyses and A-Pog 17/11/14 Mon 09:15-12:00
9  9 Dr. M. Yitschaky Bjork and Jarabak analyses 23/11/14 Sun 10:30-12:30
10 10 Dr. Friedman Visual Treatment Objectives & Growth Prediction 24/11/14 Mon 10:15-13:00
11 23 Dr. Shipperman Space Analysis: Basic principles and systems(2) 25/11/14 Tue 08:00-10:00
12 11 Dr. O. Yitschaky McNamara analysis 01/12/14 Mon 12:30-15:00
13 12 Dr. Tendlich Introduction to Digital Photography 02/12/14 Tue 10:15-12:30
14 14 Dr. Dykstein Principles of Orthodontic Photography 10/12/14 Wed 13:15-16:00
15 13 Dr. Weinberger Radiation Risk in cephalometry 14/12/14 Sun 11:30-13:00
16 15 Dr. Katz Soft tissue & Air way analysis 16/12/14 Tue 10:00-12:30
17 16 Dr. Katz Superimpositions 23/12/14 Tue 10:15-13:00
18 17 Dr. Abed Computerized cephalometry - background 06/01/15 Tue 8:15-11:00
19 18 Dr. Abed Computerized cephalometry & Imaging Exercise 13/01/15 Tue 8:15-11:00
20 19 Dr. Hiler or Dr. Friedlander Computerized tomography (CT) basics and background 20/01/15 Tue 09:30-12:30
21 20 Dr. Abed 3D cephalometry 27/01/15 Tue 10:15-13:00
22 21 Dr. Abed Computerized Imaging & enhancing software 03/02/15 Tue 08:15-11:00
23 22 Dr. Shipperman Space Analysis: Basic principles and systems 10/02/15 Tue 08:15-11:00
24 24 Dr. Ross Computerized space analysis 25/02/15 Wed 13:15-16:00

Required Reading:
1+2
Required
2. A. Jacobson (ed): Radiographic Cephalometry from Basic to 3-D imaging ,2nd Ed 2006 Ch. 3(33-43),
Optional

3
Required
1. A. Jacobson (ed): Radiographic Cephalometry from Basic to 3-D imaging ,2nd Ed 2006 Ch. 7( 71-78)

Recommended
4. C.C Steiner Cephalometrics as a clinical tool Vistas in Orthodontics 1962

4

Required

Recommended

5

Required
1. A. Jacobson (ed): Radiographic Cephalometry from Basic to 3-D imaging ,2nd Ed 2006 Ch. 15 (161-184)

Recommended

6

Required
5. Baik CY, Ververidou M: A new approach of assessing sagittal discrepancies: the
Recommended

Required

Recommended

Will be published later
9

Recommended
Required

Recommended

11
Required

Recommended

12
Recommended
(619-625) 2002

13

Required

14

Required

15

Required

Recommended
12. Park YC, Burstone CJ. Soft tissue profile fallacies of hard tissue-standards in

Airway
Required
15. Ricketts analysis in A Jacobson and RL Jacobson (ed), Radiographic
EJO 1995;17:491-495.

Recommended
18. Gavish A et al. Cephalometric and polysomnographic analysis of functional
magnetic system therapy in patients with obstructive sleep apnea. AJODO
2001;120:169-177.
19. Wyche CJ, Wilmot JJ, Brooks SL. Frequency of radiographic turbinate bones on
20. Preston CB, Lampasso JD, Tobias PV: Cephalometric evaluation and

16
Required
2. (1) R.M.Ricketts: A four step method to distinguish orthodontic changes from
natural growth. JCO 208-228, 1975.
(2) S.D. Springate, A.G. Jones: The validity of two methods of mandibular
superimposition: A comparison with tantalum implants. Am J Orthod Dentofacial
3. A.Bjork: Normal and abnormal growth of the mandible. A synthesis of longitudinal
cephalometric implant studies over a period of 25 years. Europ J Orthod 5: 40-44
(appendix), 1985.
4. S. Baumrind, Y. Ben-Bassat, E.L. Korn, L.A. Korn, L.A. Bravo and S. Curry:
Mandibular remodelling measured on cephalograms: part 2. A comparison of
information from implant and anatomical best fit superimpositions.
cephalometric treatment changes. Am J Orthod Dentofacial Orthop, 1989, 95:
422-31.
maxillary superimposisiton techniques using metalic implants. Am J Orthod

17
Required
1. A. Jacobson (ed): Radiographic Cephalometry from Basic to 3-D imaging, 2nd Ed Ch.. 20 (219-231) & Ch. 21 (233-247) & Ch. 22(249-266).

Recommended
2. Graber T.M : Orthodontics: Current principles and Techniques.3th Ch 8 (353-374)

18
Required

19
Will be published later
20
Will be published later
21
Required
1. Demetrios J. Halazonetis, DMD, MSa, Martin N. Abelson, AB, DDS, ABOb: Digital image processing: How to retouch your clinical photographs, American Journal of Orthodontics and Dentofacial Orthopedics, October 2000, Volume 118, Number 4, p469 to p475.
Recommended
2. Michael L. Swartz: Managing digital images,

22+23

Required


24
Will be published later
Course evaluation: Written and practical test

Additional Reading Material:
None

Course/Module evaluation:
End of year written/oral examination 80 %
Presentation 0 %
Participation in Tutorials 10 %
Project work 10 %
Assignments 0 %
Reports 0 %
Research project 0 %
Quizzes 0 %
Other 0 %

Additional information:
None