Integrated Course in Occlusion Incoming Second Year AY 2022/23 Term IV (1.5.2023 – 2.6.2023) 5 weeks

LECTURE SCHEDULE

Date	Lecture Topic	Lecturer	Time	Venue
<u>Week 1</u> 1.5.23 (Mon)	[PUBLIC HOLIDAY]	-	2.00-3.00pm	-
<u>Week 1</u> 2.5.23 (Tues)	Course Introduction: Concepts of Occlusion Issue of occlusal instrumentation	КТ	9.00-10.00am	L9 SimLab
<u>Week 1</u> 4.5.23 (Thu)	Making Impressions / Study Casts	КТ	2.00-3.00pm	L9 SimLab
<u>Week 2</u> 8.5.23 (Mon)	Articulation of Casts. Concept of Terminal Hinge Axis (THA); Kinematic and Arbitrary Facebow Transfer	KT	2.00-3.00pm	L9 SimLab
<u>Week 2</u> 9.5.23 (Tues)	[NO LECTURE] Lab Exercises Preparation for Functional Waxing Exercise on 11.5.23	KT	9.00-10.00am	L9 SimLab
<u>Week 3</u> 15.5.23 (Mon)	Functional Anatomy and Biomechanics of the Stomatognathic System I - Dento-Alveolar Complex and Cranio-Mandibular Articulation	KT	2.00-3.00pm	L9 SimLab
<u>Week 3</u> 16.5.23 (Tues)	Maxillomandibular Records: Active vs Passive CR Registrations; Technique modifications in dentate / partially dentate / fully edentulous situation.	КТ	9.00-10.00am	L9 SimLab
Week 4 22.5.23 (Mon)	Functional Anatomy and Biomechanics of the Stomatognathic System II - Neuroanatomy and Physiology	KT	2.00-3.00pm	L9 SimLab
<u>Week 4</u> 23.5.23 (Tues)	Centric Relation	КТ	9.00-10.00am	L9 SimLab
<u>Week 5</u> 29.5.23 (Mon)	Alignment and Occlusion of the Dentition	KT	2.00-3.00pm	L9 SimLab
<u>Week 5</u> 30. 5.23 (Tues)	Mechanics of Mandibular Movement; Posterior determinants; Active vs. Passive; Condylar border movements;	KT	9.00-10.00am	L9 SimLab

A/P Keson Tan Course Director Amended 6/6/23

cc. Director, Discipline of Prosthodontics, OD and Endodontics

Dr Michael Lim	Dr Elvin Leong
Dr Teo Juin Wei	Dr Wong Kuan Yee
Dr Tay Koong Jiunn	Dr Sophia Hui Xin Yee
Dr Chen Wei Ting, Dr Justin Lam, Dr	Charles Tan

Integrated Course in Occlusion Incoming Second Year AY 2022/23

Term IV (1.5.2023 – 2.6.2023) 5 weeks

CLINICAL-LABORATORY EXERCISE / DEMONSTRATION

When a Practical Demo is scheduled, a 30 min briefing precedes each practical session. Briefings will be in **L9 SIMLAB** as indicated. Clinics will be in **Level 8 Clinic** on Monday afternoons and Tuesday mornings.

* Each student is to pair up with the next in the class list by serial number.

* The Demo Groups by class list index number / Locations / Demo Instructor are as follows:

Group A = 20	(Index 1 to 20)	L9 SimLab	L 8 Clinic	KT
Group B = 20	(Index 21 to 40)	L9 SimLab	L 8 Clinic	EL / ML
Group C = 20	(Index 41 to 60)	L9 SimLab	L 7 Clinic	TJW / SHXY
Group D = 20	(Index 61 to 80)	L9 SimLab	L 7 Clinic	WKY

Date	Topic / Demo/Exercise	Staff	Time	Venue
<u>Week 1</u> 1.5.23 (Mon)	[PUBLIC HOLIDAY]	-	-	-
<u>Week 1</u> 2.5.23 (Tues)	Issue of occlusal instrumentation (<i>Amman Girrbach Artex CR Articulator & Artex Facebow,</i> , TMJ Trimeasure, Impression Trays).	KT, ML, WKY, SHXY	10.00am - 1.00pm	L9 SimLab
	<i>Lab Demo</i> : Pouring casts in rubber molds Preparation for Functional Waxing Exercise on <mark>11.5.23</mark>	GJM, CJH		
<u>Week 1</u> 4.5.23 (Thu)	<i>Clinic Demo</i> : Impression making technique <i>Lab Demo</i> : Pouring casts in Type IV stone	KT ML, EL, TKJ CWT, JL, CT	3.00pm - 5.00pm	L9 SimLab L 7/8 Clinic
	Lab Demo: Cast Mounting Preparation for Functional Waxing Exercise on <mark>11.5.23</mark>	GJM, CJH		
<u>Week 2</u> 8.5.23 (Mon)	<i>Clinic Demo</i> : Arbitrary Facebow Transfer - AG system	KT, EL, TJW, WKY	3.00-5.00pm	L9 SimLab L 7/8 Clinic
	<i>Lab Demo</i> : Mounting of Casts – Facebow to Artex Transfer Stands, Transfer Table, Mounting Articulator	GJM, CJH		
	<i>Lab Demo</i> : Cast Mounting Preparation for Functional Waxing Exercise on <mark>11.5.23</mark>			
<u>Week 2</u> 9.5.23 (Tues)	[NO LECTURE] Lab Demo: Trimming & Finishing of Study models - 1 set (articulated)	KT, ML, WKY, SHXY	9.00am - 1.00pm	L9 SimLab L 7/8 Clinic
		GJM, CJH		
<u>Week 2</u> 11.5.23 (Thu)	PreDemo Lecture: Occlusal Morphology I: Factors affecting Occlusal Morphology	KT ML, EL, TKJ CWT, JL, CT	2.00pm - 5.00pm	L9 SimLab
	Functional Waxing Exercise I (<i>after Lundeen</i>) – Occlusal wax-up on "cut-off" casts : upper left 5, 6 and lower left 5, 6	GJM, CJH		

<u>Week 3</u> 15.5.23 (Mon)	Clinical & Lab Exercise (continued)	KT, EL, TJW, WKY GJM, CJH	3.00-5.00pm	L9 SimLab L 7/8 Clinic
<u>Week 3</u> 16.5.23 (Tues)	Clinic Demo: Centric Relation Records – Bimanual technique, Lucia Jig and Chin- point guidance Lab Demo: Mounting of Casts – CR Record	KT, ML, WKY, SHXY GJM, CJH	10.00am - 1.00pm	L9 SimLab L 7/8 Clinic
<u>Week 3</u> 18.5.23 (Thu)	<u>PreDemo Lecture</u> : Occlusal Morphology II: Clinical Application Functional Waxing Exercise II (continued)	KT ML, EL, TKJ CWT, JL, CT GJM, CJH	2.00pm - 5.00pm	L9 SimLab
<u>Week 4</u> 22.5.23 (Mon)	<i>Lab Demo</i> : Mounting of Casts Clinical & Lab Exercise (continued)	KT, EL, TJW, WKY GJM, CJH	3.00- 5.00pm	L9 SimLab L 7/8 Clinic
<u>Week 4</u> 23.5.23 (Tues)	Clinical & Lab Exercise (continued)	KT, ML, WKY, SHXY GJM, CJH	10.00am - 1.00pm	L9 SimLab L 7/8 Clinic
<u>Week 4</u> 25.5.23 (Thu)	Functional Waxing Exercise III (continued) [KT at MDS Exams]	KT ML, EL, TKJ CWT, JL, CT GJM, CJH	2.00pm - 5.00pm	L9 SimLab
<u>Week 5</u> 29.5.23 (Mon)	Clinical & Lab Exercise (continued)	KT, EL, TJW, WKY GJM, CJH	3.00- 5.00pm	L9 SimLab L 7/8 Clinic
<u>Week 5</u> 30. 5.23 (Tues)	Clinical & Lab Exercise (continued)	KT, ML, WKY, SHXY GJM, CJH	10.00am - 1.00pm	L9 SimLab L 7/8 Clinic
<u>Week 5</u> 1.6.23 (Thurs)	Functional Waxing Exercise IV (continued)	KT ML, EL, TKJ CWT, JL, CT GJM, CJH	2.00pm - 5.00pm	L9 SimLab

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> Technicians i/c: Ms Goh Jia Man, Mr Chin Jia Hao Level 7 and Level 8 Clinic Nurse i/c Dental Store i/c ITU Technician i/c – Mr Tok Wee Wah

Integrated Course in Occlusion Second Year AY 2023/24 Term I (3.7.23 - 1.9.23) 9 weeks LECTURE SCHEDULE

Date	Lecture Topic	Lecturer	Time	Venue
<u>Week 1</u> 4.7.23 (Tues)	The occlusal interface: Structural and neurophysiologic considerations. What is an occlusal interference?	KT	8.00-9.00 am	SimLab
<u>Week 1</u> 6.7.23 (Thurs)	Vertical Dimension in relation to Removable Prosthodontics	WKY	8.00-9.00 am	SimLab
<u>Week 2</u> 11.7.23 (Tues)	Eccentric Pathways: Registration and coordination	КТ	8.00-9.00 am	SimLab
<u>Week 2</u> 13.7.23 (Thurs)	Occlusal Considerations in Removable Prosthodontics	SHXY	8.00-9.00 am	SimLab
<u>Week 3</u> 18.7.23 (Tues)	Determinants of Occlusal Morphology	KT	8.00-9.00 am	SimLab
<u>Week 3</u> 20.7.23 (Thurs)	Mandibular Motion Envelopes; VIDEO on Functional Jaw Movements	KT	8.00-9.00 am	SimLab
<u>Week 4</u> 25.7.23 (Tues)	Anterior Guidance: Recording Anterior Determinants; Dentate and edentulous situations	KT	8.00-9.00 am	SimLab
Week 4 27.7.23 (Thurs)	Criteria for Optimum Functional Occlusion	KT	8.00-9.00 am	SimLab
<u>Week 5</u> 1.8.23 (Tues)	NO CLASS <nus orientation="" week="" –one=""></nus>	-	-	-
<u>Week 5</u> 3.8.23 (Thurs)	NO CLASS < NUS Orientation Week –One>	-	-	-
<u>Week 6</u> 8.8.23 (Tues)	NO CLASS <nus orientation="" week="" zero=""> NUS Rag Day Preparations</nus>	-	-	-
<u>Week 6</u> 10.8.23 (Thurs)	NO CLASS <nus orientation="" week="" zero=""> NUS Rag Day Preparations</nus>	-	-	-
<u>Week 7</u> 15.8.23 (Tues)	Occlusal Schemes: Natural vs. latrogenic; Rationale for selection	KT	8.00-10.00 am	SimLab
<u>Week 7</u> 17.8.23 (Thurs)	<no lecture=""></no>	-	8.00-9.00 am	SimLab
<u>Week 8</u> 22.8.23 (Tues)	Tutorial: Whole Class: The Artex Articulator System	KT	8.00-9.00 am	SimLab
Week 8 24.8.23 (Thurs)	<no lecture=""></no>	-	8.00-9.00 am	SimLab
<u>Week 9</u> 29.8.23 (Tues)	END OF COURSE TEST (3 hours)	Invigilators	9.00am- 12.00pm	SimLab
<u>Week 9</u> 31.8.23 (Thurs)	Overview of Temporo-Mandibular Disorders (TMD)	THH	8.00-9.00 am	SimLab

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Integrated Course in Occlusion Second Year AY 2023/24

Term I (3.7.23 - 1.9.23) 9 weeks

CLINICAL-LABORATORY EXERCISE / DEMONSTRATION

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* The Demo Groups by class list index number / Locations / Demo Instructor are as follows:

Group A = 20	(Index 1 to 20)	L9 SimLab	L8 Clinic	KT / TJW
Group B = 20	(Index 21 to 40)	L9 SimLab	L8 Clinic	ML
Group C = 20	(Index 41 to 60)	L9 SimLab	L7 Clinic	EL / SHXY
Group D = 20	(Index 61 to 80)	L9 SimLab	L7 Clinic	WKY / TKY

Date	Topic / Demo/Exercise	Staff	Time	Venue
<u>Week 1</u> 4.7.23 (Tues)	Clinic Demo: Occlusal Examination & Completion of Occlusal Examination forms Intra-oral verification of mounted casts Shimstock / GHM checks Occlusal analysis on semi-adjustable articulator	KT, ML, EL, WKY CWT, JL, CT GJM, CJH L8 / L7 Clinic i/c	9.00am-1.00 pm	L9 SimLab L8 Clinic L7 Clinic
Week 1 6.7.23 (Thurs)	Clinical Exercises (continued)	ML, TJW, SHXY, TKJ GJM, CJH L8 / L7 Clinic i/c	9.00am-1.00 pm	L9 SimLab L8 Clinic L7 Clinic
<u>Week 2</u> 11.7.23 (Tues)	Clinic Demo: Eccentric registrations (lateral and protrusive checkbites) for Artex CR articulator. Setting of condylar controls from eccentric registrations. Clinical Exercises (continued)	KT, ML, EL, WKY CWT, JL, CT GJM, CJH L8 / L7 Clinic i/c	9.00am-1.00 pm	L9 SimLab L8 Clinic L7 Clinic
Week 2 13.7.23 (Thurs)	Clinical Exercises (continued)	ML, TJW, SHXY, TKJ GJM, CJH L8 / L7 Clinic i/c	9.00am-1.00 pm	L9 SimLab L8 Clinic L7 Clinic
<u>Week 3</u> 18.7.23 (Tues)	Clinical Exercises (continued)	KT, ML, EL, WKY CWT, JL, CT GJM, CJH L8 / L7 Clinic i/c	9.00am-1.00 pm	L9 SimLab L8 Clinic L7 Clinic
Week 3 20.7.23 (Thurs)	Clinical Exercises (continued)	ML, TJW, SHXY, TKJ GJM, CJH L8 / L7 Clinic i/c	9.00am-1.00 pm	L9 SimLab L8 Clinic L7 Clinic
<u>Week 4</u> 25.7.23 (Tues)	<i>Lab Demo:</i> Fabrication of Custom Anterior Guide Table	KT, ML, EL, WKY CWT, JL, CT GJM, CJH L8 / L7 Clinic i/c	9.00am-1.00 pm	L9 SimLab L8 Clinic L7 Clinic

Week 4 27.7.23 (Thurs)	Clinical Exercises (continued)	ML, TJW, SHXY, TKJ GJM, CJH L8 / L7 Clinic i/c	9.00am-1.00 pm	L9 SimLab L8 Clinic L7 Clinic
Week 5 1.8.23 (Tues)	<nus orientation="" week="" –one=""> NO CLASS</nus>	-	-	-
<u>Week 5</u> 3.8.23 (Thurs)	<nus orientation="" week="" –one=""> NO CLASS</nus>	-	-	-
<u>Week 6</u> 8.8.23 (Tues)	<nus orientation="" week="" zero=""> <u>NO CLASS</u> NUS Rag Day Preparations</nus>	-	-	-
<u>Week 6</u> 10.8.23 (Thurs)	<nus orientation="" week="" zero=""> <u>NO CLASS</u> NUS Rag Day Preparations</nus>	-	-	-
<u>Week 7</u> 15.8.23 (Tues)	Clinical Exercises (continued)	KT, ML, EL, WKY CWT, JL, CT GJM, CJH L8 / L7 Clinic i/c	10.00am-1.00 pm	L9 SimLab L8 Clinic L7 Clinic
<u>Week 7</u> 17.8.23 (Thurs)	Clinical Exercises (continued)	ML, TJW, SHXY, TKJ GJM, CJH L8 / L7 Clinic i/c	9.00am-1.00 pm	L9 SimLab L8 Clinic L7 Clinic
<u>Week 8</u> 22.8.23 (Tues)	Clinical Exercises (continued)	KT, ML, EL, WKY CWT, JL, CT GJM, CJH L8 / L7 Clinic i/c	9.00am-1.00 pm	L9 SimLab L8 Clinic L7 Clinic
<u>Week 8</u> 24.8.23 (Thurs)	Clinical Exercises (continued)	ML, TJW, SHXY, TKJ GJM, CJH L8 / L7 Clinic i/c	9.00am-1.00 pm	L9 SimLab L8 Clinic L7 Clinic
<u>Week 9</u> 29.8.23 (Tues)	END OF COURSE TEST	KT, ML, EL, WKY CWT, JL, CT GJM, CJH L8 / L7 Clinic i/c	9.00am-12.00 pm	L9 SimLab
<u>Week 9</u> 31.8.23 (Thurs)	Clinical Exercises (Reserve Session)	ML, TJW, SHXY, TKJ GJM, CJH L8 / L7 Clinic i/c	9.00am-1.00 pm	L9 SimLab L8 Clinic L7 Clinic

A/P Keson Tan Course Director

Amended 6/6/23

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READING LIST - OCCLUSION and TMD

Recommended Textbook

Okeson J P : *Management of Temporomandibular Disorders and Occlusion*. 7th Edition. Elsevier Mosby, St Louis/Baltimore/Philadelphia/ Toronto, 2012

LATEST Ed: 8th Edition. Elsevier Mosby, St Louis/Baltimore/Philadelphia/ Toronto, April 2019

Recommended Reference Textbook

Mohl N D, Zarb G A , Carlsson G E, Rugh J D : *A Textbook of Occlusion*. Quintessence Publishing Co. Inc., Chicago/London/Berlin/Sau Paulo/Tokyo/ Hong Kong, 1998.

Required Additional Reading

Wiskott H W A. **Fixed Prosthodontics: Principles and Clinics.** Quintessence Publishing Co Ltd. 2011. <u>Chapter 4</u>: Forces and Mastication, pp. 69-96; <u>Chapter 5</u>: Mandibular Movements and Functional Occlusion, pp. 97-126 and <u>Chapter 17</u>: Occlusal Relationships, pp. 581-614.

Shillingburg H T, Hobo S, Whitsett L D : *Fundamentals of Fixed Prosthodontics*. 3rd Edition, Quintessence Publishing Co. Inc., Chicago, 1997. <u>Chapters 2</u>: Fundamentals of Occlusion, pp. 55-78; <u>Chapter 12</u>: Articulation of Casts, pp. 259-299 and <u>Chapter 13</u>: Wax Patterns, pp. 299-326.

Rosentiel, SF, Land, MF and Fujimoto, J: *Contemporary Fixed Prosthodontics*. 4th Edition. The C.V. Mosby Company. St. Louis, Toronto, London, 2006. <u>Chapter 3</u>: Principles of Occlusion; pp 65-84.

Lundeen, HC and Gibbs, CH, *Advances in Occlusion*. John Wright and Sons Ltd., London, 1993. <u>Chapter 1</u> pp 2-32

Lundeen, HC, and Gibbs, CH. The Function of Teeth. The physiology of mandibular function related to occlusal form and esthetics. L & G Publishers, 2005.

Zarb GA, Bergman B, Clayton JA, MacKay HF (Eds). *Prosthodontic Treatment for the partially edentulous patient*. Mosby St Louis. 12th Edition. 2003 <u>Chapter 16</u>: Various centric positions and methods of recording them. <u>Chapter 17</u>: Articulators in restoring occlusion. <u>Chapter 15</u>: The consequences of occlusal interferences. pp 171-187, 188-208 and 161-170.

Malone WFP, Koth DL, Cavazos E, Kaiser DA, Morgano SM, Eds. *Tylman's Theory and Practice of Fixed Prosthodontics*, 8th Edition, Ishiyaku EuroAmerica Inc., St Louis, 1999, <u>Chapter 14</u>: Occlusion pp 301-323.

DuBrul EL: *Sicher and DuBrul's Oral Anatomy*, 8th Edition. Ishiyaku EuroAmerica Inc., St Louis, 1998. <u>Chapter 1</u>: pp 54-58; <u>Chapter 4</u>: pp 104-132; <u>Chapter 5</u>: pp 133-159; <u>Chapter 17</u>: pp 319-329.

https://www.amanngirrbach.com/en/products/articulation/artex-cr/

https://www.amanngirrbach.com/en/products/articulation/artex-facebow

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https://www.amanngirrbach.com/fileadmin/ agweb 2013/media/mediathek/Print/Instructions/Equipment/Model f abrication_Articulation/Artex_Uebertragungsstand_INT.pdf

Additional References - Advanced

McNeill, C (Ed). *Science and Practice of Occlusion*, Quintessence Publishing Co. Inc., Chicago/London/Berlin/Tokyo, 1997.

Okeson JP, Ed. *Bell's Orofacial Pains: The Clinical Management Of Orofacial Pain*, 6th Ed. Quintessence Publishing Co. Inc., Chicago / London / Berlin / Tokyo, 2005.

Zarb GA, Carlsson GE, Sessle BJ, Mohl ND Eds. *Temporomandibular Joint and Masticatory Muscle Disorders*. 2nd Edition. Mosby, St. Louis, Toronto, London, 1995.

Sarnat BG, Laskin DM. *The Temporomandibular Joint – A Biological Basis for Clinical Practice*, 4th Ed., W. B. Saunders Co., Philadelphia, 1992.

Okeson JP, Ed. *Orofacial Pain – Guidelines for Assessment, Diagnosis and Management*, 6th Ed Quintessence Publishing Co. Inc., Chicago/London/Berlin/Tokyo, 1996.

McNeill, C. Craniomandbular Disorders - Guidelines for Evaluation, Diagnosis and Management – The American Academy of Craniomandibular Disorders, Quintessence Publishing Co. Inc., Chicago / London / Berlin / Tokyo, 1990.

McNeill, C. *Current Controversies in Temporomandibular Disorders*, Quintessence Publishing Co. Inc., Chicago/London/Berlin/Tokyo, 1992.

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