The European Council of Optometry and Optics

Report of a Preliminary Visit

as part of the Oculus Erasmus + Project to

The Department of Optometry

at

Hadassah Academic College

Jerusalem, Israel

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Introduction

According to estimates from the World Health Organization, approximately 80% of global blindness is avoidable. Screening is essential to detect and remedy vision problems early on, and in many regions optometrists are the primary providers of this service. High prevalence of avoidable blindness and vision impairment are recognized as important public health concerns in India and Israel. One of the barriers that prevent these two countries from achieving better eye care for their citizens is a shortage of well-trained optometrists.

To address this situation, a new project led by a consortium of educators from optometry schools in Europe is looking to improve and reform existing curricula of optometric education in India and Israel to raise it to a high-standard level using the European Diploma in Optometry as a benchmark.

OCULUS (**O**ptometry **CU**rriculum for **L**ifelong learning through Erasm**US**) will employ a three-pillar strategy to reform optometric education in India and Israel. Amongst other objectives, the project will also facilitate mobility between the regions.

ECOO's Accreditation Scheme for the European Diploma of Optometry allows for either a full accreditation process or benchmarking for those schools which do not want to undertake the full accreditation scheme but want to find out how their course aligns with the Diploma. In the Oculus project the benchmarking process will be used at the outset to identify gaps in the knowledge and competency base of the programmes in the Indian and Israeli partners and at the end of the project to repeat the process to demonstrate how the Oculus programme has enhanced curriculum development and aligned programmes.

The Structure of Optometry and Optometric Education in Israel with Specific Reference to Hadassah Academic College

In Israel, the law recognising optometry dates back to 1991. In 1996 programmes for optometry were established in Hadassah Academic College and Bar Ilan University. The higher education structure includes Universities and Colleges. As a College Hadassah awards degrees at Bachelor level, and a Masters course in Optometry was introduced 11 years ago. The academic year begins in October. A course for ultra-orthodox Jewish women was started four years ago with the first cohort graduating in June 2017. They do not award PhD's. The course is four years duration, but the BOptom is not a licence to practice. The programme is regulated by the Ministry of Education which is responsible for approval of the course.

Graduates have to undertake a written and practical examination which is run by the Ministry of Health but is administered by the Israeli College of Optometry through a panel of two optometrists and two ophthalmologists. There does not appear to be any 'formal' timing/structure to this pre-registration process. HAC students have an 85% pass rate in this examination, which can be taken at any point after graduating with a BSc Optometry.

Degrees of graduates from Jordan who wish to practise in Israel are not recognised by the Ministry of Education but are allowed to take the licensing examination by the Ministry of Health.

The Israel Law of Optometry states the following regarding use of diagnostic pharmaceuticals: *"An optometrist may not treat a patient with medicines or pharmaceutical agents and may not possess such agents **unless** guidelines are prepared by a Ministry of Health Committee."* Since 1991 a committee has not been appointed to prepare guidelines for optometric use of diagnostic pharmaceuticals. The HAC legal advisors allow the use of diagnostic pharmaceuticals only under the direct supervision of an ophthalmologist.

Regarding Children and Elderly patients, the 1991 law of optometry reads *"An Optometrist may not treat a child or elderly person, unless it is under the supervision of an ophthalmologist. The **Minister of Health** will issue rules based on a professional staff of doctors and optometrists appointed by the Minister to **determine the definition of "child" and "elderly**".* At HAC, children under age 6 are seen at clinics with OMDs

Entry requirements for the Hadassah course are a high-school diploma (matriculation) including a minimum of 21 points of which 4-5 points must be in each of Maths, English and Chemistry. Physics and biology are not required subjects in themselves, as they are taught in the first year. There is a psychometric test and interviews.

The undergraduate intake is 40 - 50 on the regular course and 30 on the Ultra Orthodox programme. There has been an increase in the number of French students (around 20) with a BTS who enter a special first year to study Hebrew, anatomy, and biology (and other courses). On successful completion they go on to join the normal course in the second year. Overall there is about a 10% failure rate in the first year but a high retention rate following that. There is a Challenge Centre to provide additional resources for students and this has been very successful. The age profile of the students varies from 18-19 years (Ultra Orthodox and Arab) and 22/25 years for Israelis that have completed military service. Overall 90% of students are female although the gender split is 50/50 for the French. The department is at full capacity.

The cost of the course to students is 10K Shekels a year (€2500). The rest of the tuition is supplemented from the Government. 50% of the students have scholarships.

There are some 1600 registered optometrists in Israel, the majority of whom work part time. There are 500 ophthalmologists for a population of 8 million a large percentage of whom are refractive surgeons and retina specialists. There are 40 paediatric ophthalmologists in Israel and another 50 who are willing to examine children.

Departmental Structure

Faculty

There are some 24 full and part time members of staff with a wide range of qualifications including PhD's, OD's, Israeli and UK trained optometrists . There are bi-

annual meetings of all the faculty and also bi-annual meetings for the clinical directors together with course and clinical directors meetings.

There is no staff-student forum. There is a student union which includes student representation form each year. A student satisfaction survey, which is teacher focussed, takes place annually and the results are reviewed by the Head of department and the individual faculty members

Facilities

The College has an Optometry clinic, which is open to the public. Clinical services include: dispensing, general intake (refraction and binocular vision), contact lenses and visual therapy/training. External clinics include screening programmes for children, low vision clinic at the Michaelson Centre at Hadassah Hospital and Hospital eye clinics where each student attends for four hours duration eight times during their 3 and 4 year as an observer. There are two satellite clinics: one at a large eye clinic at a local HMO and another at a charity that provides free eye exam and glasses for children.

Syllabus and module Specification

There is a detailed module specification setting out the number of credits, hours of instruction and the lecturer together with contact details together with a course description, aims of the module, learning outcomes, required attendance, teaching arrangements and method of instruction together with a bibliography. The module content is set out on a weekly basis. The assessment method is detailed. A summary of the modules is attached as **Appendix A.**

General Optometry Clinic

This clinic takes place in both semesters in the third year (five hours a week) when the students will see 26 patients during the year. Students work on a 1:1 basis with the patient and there is a 1:3 student/supervisor ratio.

In the fourth year there is one semester in the internal clinic and an external rotation (satellite clinic) in the following semester. Students will see approximately 65-70 patients in total across the programme. There is a 1:3 or 1:4 supervisor ratio in the internal clinic. The satellite clinic is supervised by Hadassah staff.

Students will also work during the summer break and may see 5-6 patients.

There is a team of supervisors, mainly part-time optometrists. There is a staff meeting at the beginning of each semester when assessment standards are discussed. This appears to be an informal procedure. Students are matched with a different supervisor for each semester in the third year and four different supervisors in the fourth year. Specific grading rubrics are used to assess student competencies.

In the third year assessment is based on 70% clinical work with patients, 20% on clinical homework and 10% on a formal examination. In the fourth year this is 60% patients, 20% clinical homework, 10% examination and 10% seminar.

Contact Lens Clinic

Fitting experience is gained in laboratories during both semester of the third year while real patients are seen in both semesters in the fourth year and during the summer break. Students work on a 1:1 basis i.e. 1 patient every other week.

The majority of fittings are soft lenses but students fit each other with RGP's and sclerals. There is some experience with kerataconic patients.

Binocular Vision and Visual Training

Clinical experience is in the fourth year and during the previous summer. There are two sessions a week in the first semester and one a week in the second. Patients are usually children. Ten students a session work in pairs and each student can expect to see two patients a semester. There are two supervisors to five patients.

Dispensing Clinic

This clinic runs in the second semester of the second year and the first semester of the third year. Five to seven students are in each clinic and each of them looks after ten patients. Overall number of dispensing episodes approximates 13 average (range 10-25) across the programme.

External Clinics

External clinics take place in the first and fourth years. These are held in kindergartens and schools and provide a screening service for mother and child. First year students undertake cover test, VA's, NPC, motility and stereopsis measurements. Final year students will undertake retinoscopy and ophthalmoscopy. Each first year student goes 2-3 times and every fourth year student goes once or twice. There is no formal assessment to this component, but it is seen as an enriching experience for the students, and promotes the optometry clinic to the community.

Low Vision

Visits are made to a low vision clinic but there is no direct experience managing a patient.

Assessment

There are detailed grading and clinical examination evaluation protocols. Module specifications include assessment details together with weightings for written, laboratory and clinical case presentations and case studies. In addition to the on-going clinical and module assessments there is a 6 part examination at the end of the final

semester in year 4. This does not sit within the modules but a failure means that the student cannot graduate.

Portfolio

At present it would appear that students would not see enough patients in the undergraduate programme to compile a portfolio in accordance with the level of the European Diploma.

The Self Assessment Document

This was considered in detail. Some errors in the document itself were noted. The numbering of the sub divisions in each section did not exist and where they did they did not match those in the Document.

In the clinical/ practical section the same number of patient episodes is repeated for each competency. This suggests that clinic timetable slots were used rather than actual patients seen by each student. More clarity is needed on the final year assessment.

It was agreed that the Self Assessment Document would be reviewed and resubmitted by the end of March with the intention of the benchmark being completed by the end of April.

The Self Assessment Document is attached as **Appendix B**

Benchmarking Opinion against the Knowledge Base and Competencies of the European Diploma in Optometry for Hadassah College

This opinion is based on the Panel's analysis of the documents supplied and on discussions at the College

Colour Coding

Knowledge Base	**Knowledge base** for European Diploma competencies
Clinical/Practical competencies	**Clinical/practical** European Diploma competencies
	Benchmarking Opinion **Satisfactory**
	Benchmarking Opinion **Some weaknesses**
	Benchmarking Opinion **Inadequate**

PART A: Optical Technology

European Diploma Examination Sections	Self-Assessment Document Competency Areas	Provisional Opinion		HAC comments
Part A 1. Optics 2. Optical Technology	**Subject 1: Geometrical Optics**			
	Subject 2: Physical Optics			
	Subject 3: Visual Optics			
	Subject 5: Optical Appliances			
	Subject 6: Occupational Optics			
	Subject 5: Optical appliances			
	Subject 6: Occupational Optics		Are these real numbers seen by every student or simply reflect the number of timetable slots? Are there individual records for all patients seen.	This is a real gap. We have strategies to recruit patients for occupational prescribing.

PART B: Management of Visual Problems

European Diploma Examination Sections	Self-Assessment Document Competency Areas	Provisional Opinion		
Part B 1. Refraction 2. Binocular Vision 3. Contact lenses Visual Perception	**Subject 4: Visual Perception**			
	Subject 7: Vision and Ageing		Subject 7(3) developmental milestones should be included. Subject 7(4) not included	Real gap. Topics to be added to paediatric optometry
	Subject 8: Refraction			
	Subject 9: Low Vision			
	Subject 10: Ocular Motility and Binocular Vision			
	Subject 11: Contact Lenses			
	Subject 12: Investigative Techniques			
	Subject 13: Paediatric Optometry			

	Subject 14: Refractive Surgery			
	Subject 8: Refraction			
	Subject 9: Low Vision		All students should have direct experience	Real Gap – setting up a low vision clinic
	Subject 10: Ocular Motility and Binocular Vision		It was not clear from looking at record keeping that this is routinely done	*Every single patient in the General clinic has ocular motilities performed and assessed b. Cover test, NPC and motility is performed by the preceptor and the students on every single patient and the superior compares the students results to his own. We think this is a misunderstanding.* *Is Electronic medical record recording OK?*
	Subject 11: Contact Lenses		Not clear whether all students fit RGP lenses on real patients	*Israeli patients are not interested in RGP lenses. In clinic, when there are not "real" patients, the students do the full fitting procedure on one another.* *Ask if friendly patient good for RGP fitting?*

	Subject 12: Investigative Techniques		Not clear where the final competency assessment takes place. No visual field experience	See below
	Subject 13: Paediatric Optometry		No evidence of assessment using diagnostic drugs	*How do we provide this evidence? We added a rubric on the electronic logbook for diagnostic pharmaceuticals – is this good enough? Or do you want something else?*

C: General Health and Ocular Anatomy

European Diploma Examination Sections	Self-Assessment Document Competency Areas	Provisional Opinion		
Part C 1.Biology 2. Ocular Biology 3. Ocular Abnormality	**Subject 12: Investigative Techniques**			
	Subject 15: Anatomy and Histology			

	Subject 16: Neuroscience			
	Subject 17: General Physiology and Biochemistry			
	Subject 18: Microbiology and Immunology		No mycology or parasitology	Real gap – will be added to microbiology course/

	Subject 19: General Pharmacology	*Changed to green*	Module description was submitted after visit. It appears to cover the necessary material	We neglected to submit the Ocular Pharmacology syllabus
	Subject 20: Pathology and General Medical disorders			

	Subject 21: Epidemiology and Biostatistics			
	Subject 22: Ocular Anatomy and Physiology			

	Subject 23: Ocular Pharmacology	*Changed to green*	Module description was submitted after visit. It appears to cover the necessary material	We neglected to submit this syllabus, but there is indeed a separate course.
	Subject 24: Abnormal Ocular Conditions			

	Subject 12: Investigative Techniques		Insufficient clinical experience in visual field assessment. Very limited use of contact tonometry	This may be a gap. Currently, the students have to present evidence that they carried out different techniques. To fill the gap - Visual fields and other techniques will be made be part of the complete exam and not in isolation.
	Subject 14: Refractive Surgery		Evidence is needed that the ability is assessed for every student	What exactly to be have to assess on every student and what kind of evidence do you suggest that we provide? At USN they have a actor prestending that they want refractive surgery. They have 10 minutes to explain about the options. 1 credit - ECTS

	Subject 24: Abnormal Ocular Conditions		Evidence is needed that the abilities are assessed for every student	This is a gap – we will implement grand rounds this year.

B.Optom APPENDIX A						
	First year					
Course Code	**Course name**	**Campus Neviim**	**Campus Straus**	**Academic hours per semester**	**Academic Credit Points**	**ECTS**
	First semester					
B1geoO	Geometric Optics	Yoach Ivri	Reutt Ifah	56	4	6
B1phys	Physics	Reut Ifrach		42	3	4.5
B1bio	Biology	Tali Shimri	Rachel Reifer	28	2	3
B1dispA	Dispensing Optics A	Rinat Carmi	Hadas Eichenstein	42	3	4.5
B1theoropt	Theoretical Optometry	Dinah Paritzky	Yaffa Zarbiv	28	2	3
B1bio	Biochemistry	Ilan Babai	Tali Shamri	28	2	3
B1genat	General Anatomy	Ariela Gordon Shaag	-	56	4	6
B1micr	Microbiology and Immunology	Tali Shimri	Rachel Reifer	28	2	3
BC1ex	External Clinics	Orit Strigler		21	0	0
					22	**33**
	Second semester					
BL1dispA	Dispensing Optics Laboratory A	Itzik Schwartz	Emannuelle Demari	28	2	3
B1physO	Physical Optics	Yoach Ivri	Reutt Ifah	42	3	4.5

B1genpharm	General Pharmocology	Salah Abu-Riyah/	Rachel Reifer	28	2	3
B1dispB	Dispensing Optics B	Ibrahim Saadeh/	Hadas Eichenstein	42	3	4.5
B1genphys	General Physiology	Moshe Daninos	Noa Zeharia	42	3	4.5
B1genpath	General Pathology	Ariela Gordon Shaag	Hadas Eichenstein	56	4	6
B1visO	Visual Optics	Dinah Paritzky	Reut Ifrah	42	3	4.5
BC1ex	External Clinics	Orit Strigler		21	0	0
				721	**20**	**30**
	Second year					
Course Code	**Course name**			**Academic hours per semester**	**Academic Credit Points**	**ECTS**
	First semester					
B2bioneurophys	Biophysics and Neurophysiology	Moshe Daninos	Noa Zeharia	42	3	4.5
B2clinoptA	Clinical Optometry A	Dinah Paritzky	Hadas Ben Eli	56	4	6
B2dispC	Dispensing Optics C	Ibrahim Saadeh	Hadas Eichenstein	28	2	3
BL2dispB	Dispensing Optics Laboratory B	Itzik Schwartz	Rinat Carmi	28	2	3
BL2binvisA	Binocular Vision Laboratory A	Rachel Eichler		28	2	3

B2binvisA	Binocular Vision A	Liat Ganz		56	4	6
B2Ocanat	Ocular Anatomy	Rachel Reifer		42	3	4.5
B2visperc	Visual Perception	Ravid Doron		28	2	3
BL2visperc	Visual Perception Laboratory	Ravid Doron		28	2	3
BL2clinopt	Clinical Optometry Laboratory	Rema Shaabani		56	4	6
					28	**42**
	Second semester					
BL2dispC	Dispensing Optics Laboratory C	Itzik Schwartz	Rinat Carmi	28	2	3
B2clinopt	Clinical Optometry B	Dinah Paritzky	Hadas Ben Eli	28	2	3
B2intropx	Introduction to Patient Care	Rachel Eichler		28	2	3
BL2binvisB	Binocular Vision Laboratory B	Rachel Eichler		28	2	3
BC2dispA	Dispensing Clinic A	Itzik Schwartz		14	1	1.5
B2binvisB	Binocular Vision B	Liat Ganz		56	4	6
B2visneuro	Visual Neurophysiology	Moshe Daninos	Noa Zeharia	42	3	4.5
BL2clinopt	Clinical Optometry Laboratory	Rema Shaabani		56	4	6
B2ocpharm	Ocular Pharmacology	Salah Abu-Riyah	Rachel Reifer	28	2	3
				700	**22**	**33**

	Third year					
Course Code	**Course name**			**Academic hours per semester**	**Academic Credit Points**	**ECTS**
	First semester					
B3ocpathA	Ocular Pathology A	Hadas Ben Eli		42	3	4.5
BL3clA	Contact Lenses Laboratory A	Nogah Bromberger		28	2	3
BL3vt	Vision Therapy Laboratory	Haim Wirzer	Rachel Eichler	28	2	3
B3advoptA	Advanced Optometry A	Veronica Tzur		56	4	6
BC3dispB	Dispensing Clinic B	Itzik Schwartz	Rinat Carmi	14	1	1.5
BL3advoptA	Advanced Optometry Laboratory A	Yaron Ashendorf		28	2	3
B3clA	Contact Lenses A	Cyril Kahloun		28	2	3
B3vtA	Vision Therapy A	Haim Wirzer	Rachel Eichler	28	2	3
B3pedopt	Pediatric Optometry	Veronica Tzur		14	1	1.5
BC3gen	General Clinics	Cyril Kahloun		70	5	7.5
					24	**36**
	Second semester					
B3ocpathb	Ocular Pathology B	Hadas Ben Eli		42	3	4.5
BL3clA	Contact Lenses Laboratory B	Nogah Bromberger		28	2	3
B3advoptB	Advanced Optometry B	Veronica Tzur		56	4	6
BL3advoptB	Advanced Optometry Laboratory B	Yaron Ashendorf		28	2	3
B3clB	Contact Lenses B	Cyril Kahloun		42	3	4.5

B3lowvis	Low Vision	Veronica Tzur		28	2	3
BL3vt	Vision Therapy Laboratory	Haim Wirzer		28	2	3
B3vtB	Vision Therapy B	Haim Wirzer	Rachel Eichler	28	2	3
B3pedopt	Pediatric Optometry	Veronica Tzur		14	1	1.5
B3stat	Statistics end Epidemiology	Hadas Ben Eli		28	2	3
BC3gen	General Clinics	Cyril Kahloun		84	5	7.5
				742	**28**	**42**
	Fourth year					
Course Code	**Course name**			**Academic hours per semester**	**Academic Credit Points**	**ECTS**
	First semester					
B4advcl	Advanced Contact Lenses	Cyril Kahloun	Jemya Dableman	42	3	4.5
B4geropt	Geriatric Optometry	Einat Shneor	Ravid Doron	21	1.5	2.25
B4clinman	Clinic Management	Jonathan Shapira		14	0	0
B4envopt	Environmental Optometry	Jonathan Shapira		14	1	1.5
BC4gen	General Clinics	Cyril Kahloun		91	6	9
BC4cl	Contact lens clinic	Eyal Gal		49	3	4.5
BC4vt	Vision Therapy Clinic	Rachel Eichler		42	3	4.5
B4proj	Final Project	Einat Shneor		28	2	3
	Second semester					

B4advcl	Advanced Contact Lenses	Cyril Kahloun	Jenya Dableman	40	4	6
BC4gen	General Clinics	Cyril Kahloun		30	4.0	6
BC4cl	Contact lens clinic	Eyal Gal		26	2.0	3
BC4vt	Vision Therapy Clinic	Rachel Eichler		30	2	3
B4proj	Final Project	Einat Shneor	Ravid Doron	20	2	3
B4clproj	Final Project Contact Lenses	Eyal Gal		10	2	3
				457	**35.5**	**53.25**
	total			**2620**	**179.5**	**269.25**