Field Monitoring Visit
Oculus Project

May 2019

OCULUS Optometry CUrriculum for Lifelong Learning through ErasmUS

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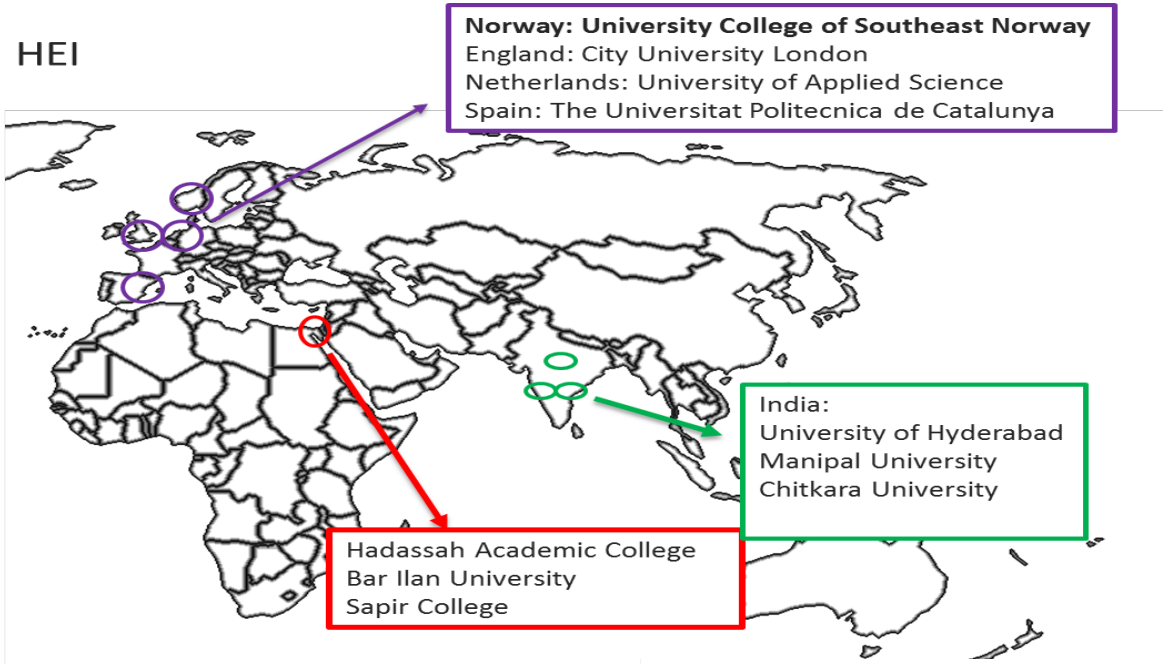
Who is in OCULUS?

- USN University College of Southeast Norway
- BIU Bar Ilan University
- HAC Hadassah Academic College
- UPC Polytechnic University of Catalonia
- HU University of Applied Science, Utrecht
- CUL City University London
- UOH University of Hyderabad
- CU Chitkara University
- MU Manipal University
- ASCO Association of Schools and Colleges of India
- ICO Israel College of Optometry
- SAP Sapir Academic College



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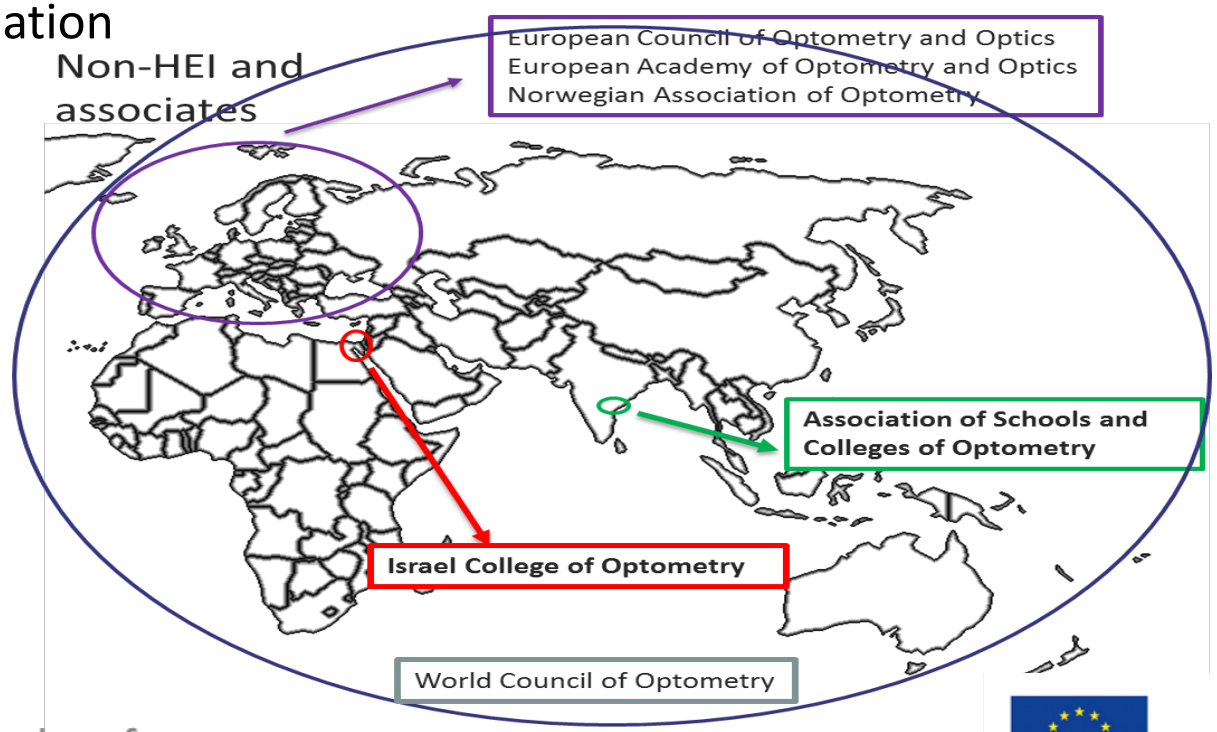
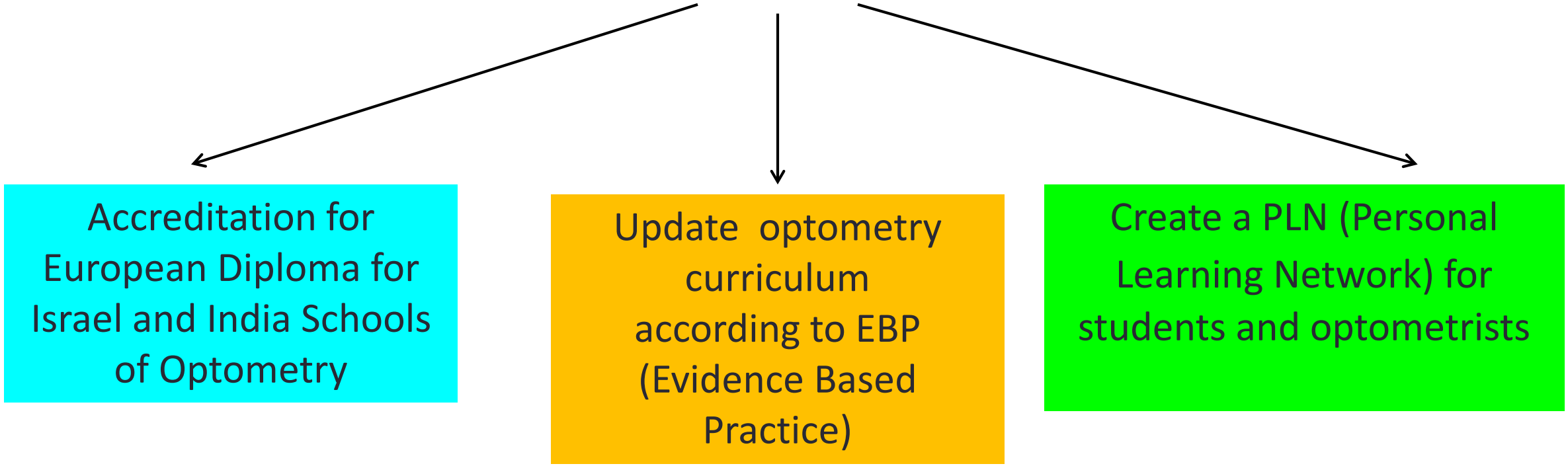
Associated partners

- WCO World Council of Optometry
- ECOO European Council of Optometry and Optics
- EAOO European Academy of Optometry and Optics
- NOA Norwegian Optometric Association



The OCULUS project



Accreditation for European Diploma for Israel and India Schools of Optometry

The European Council of Optometry and Optics

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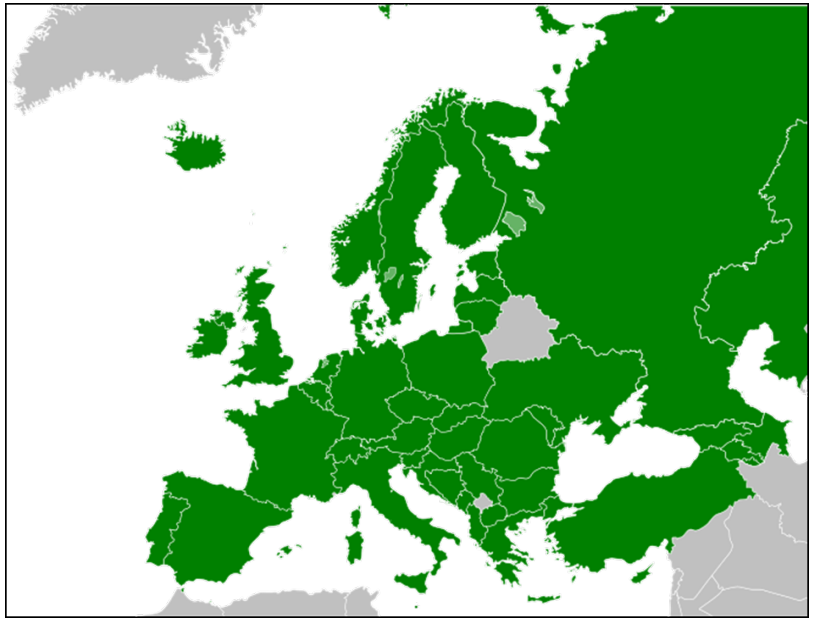
Accreditation for European Diploma for Israel and India Schools of Optometry

- ✓ Update optometric education in Israel and India to “Gold standard”.
- ✓ Teach to the level of diagnostics
- ✓ Greater employability and job mobility for graduates: in line with Bologna Process
- ✓ Better trained optometrists will lead to a reduction in blindness and vision impairment.

The Bologna Process:



- Education agreements btw European countries regarding higher education
- Signed in Bologna, Italy in 1999 by Ministers of Education and university leaders
- Comparability in standards of higher education
- Equivalency of degrees
- Mobility between countries

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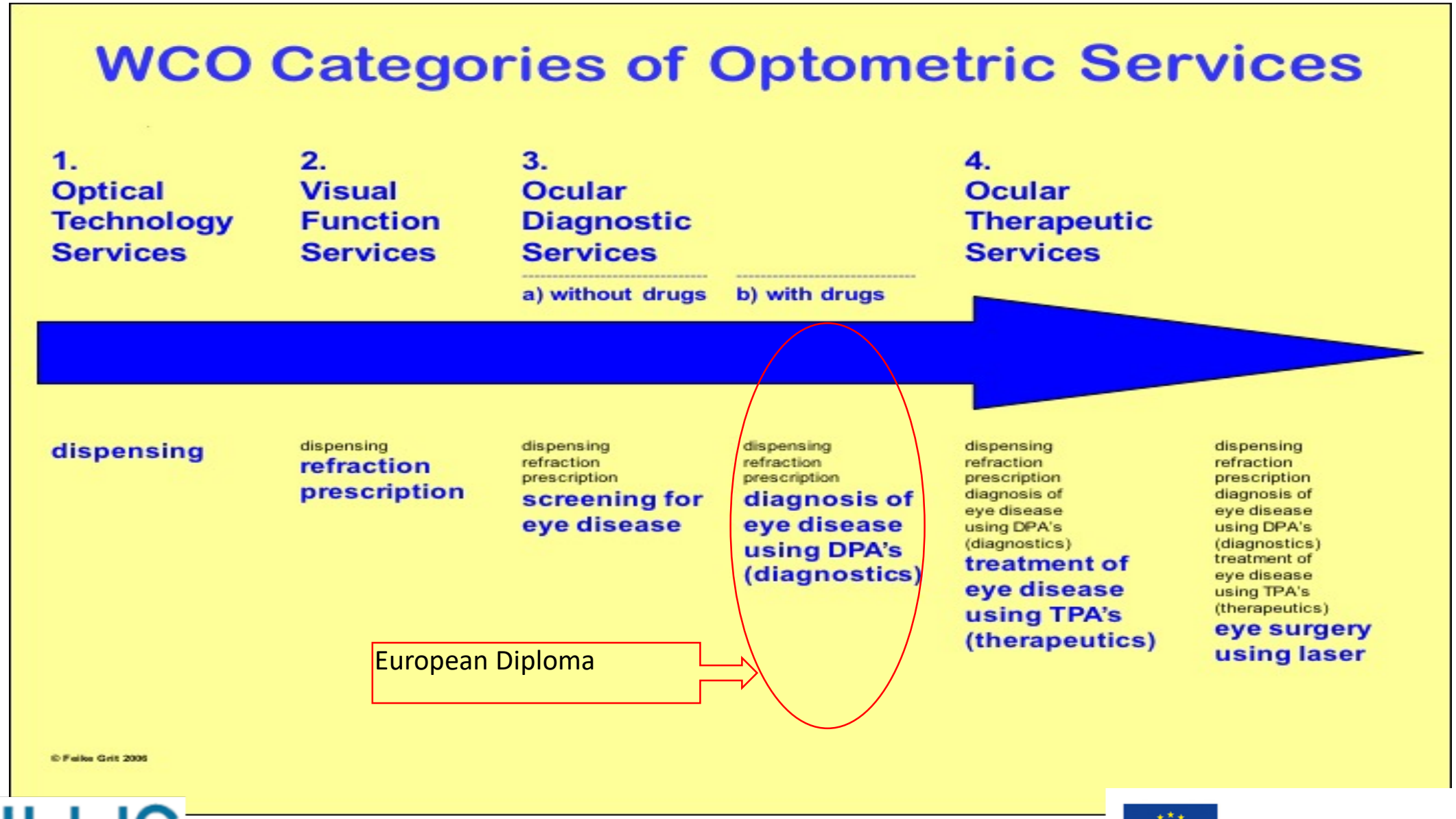
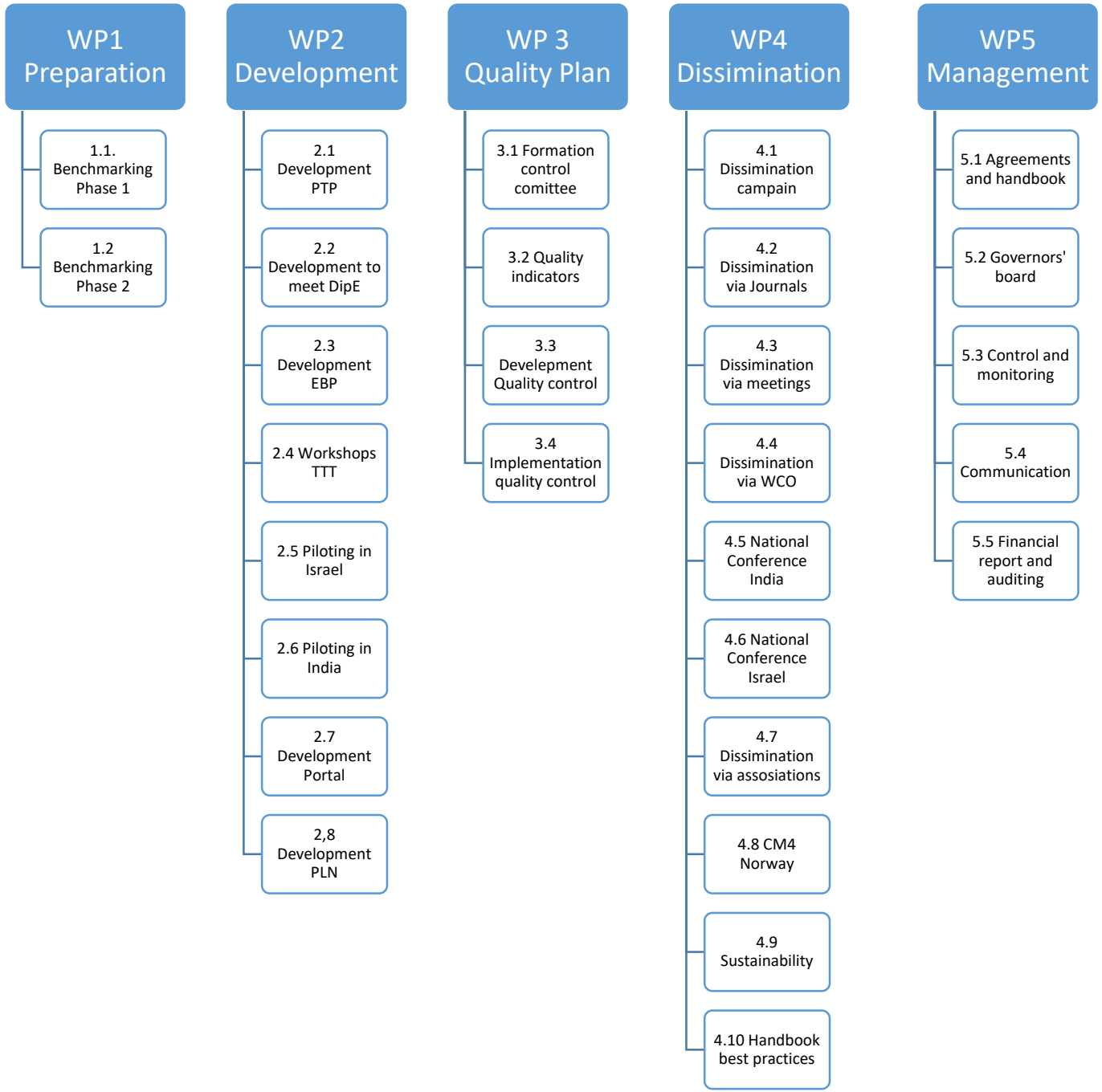
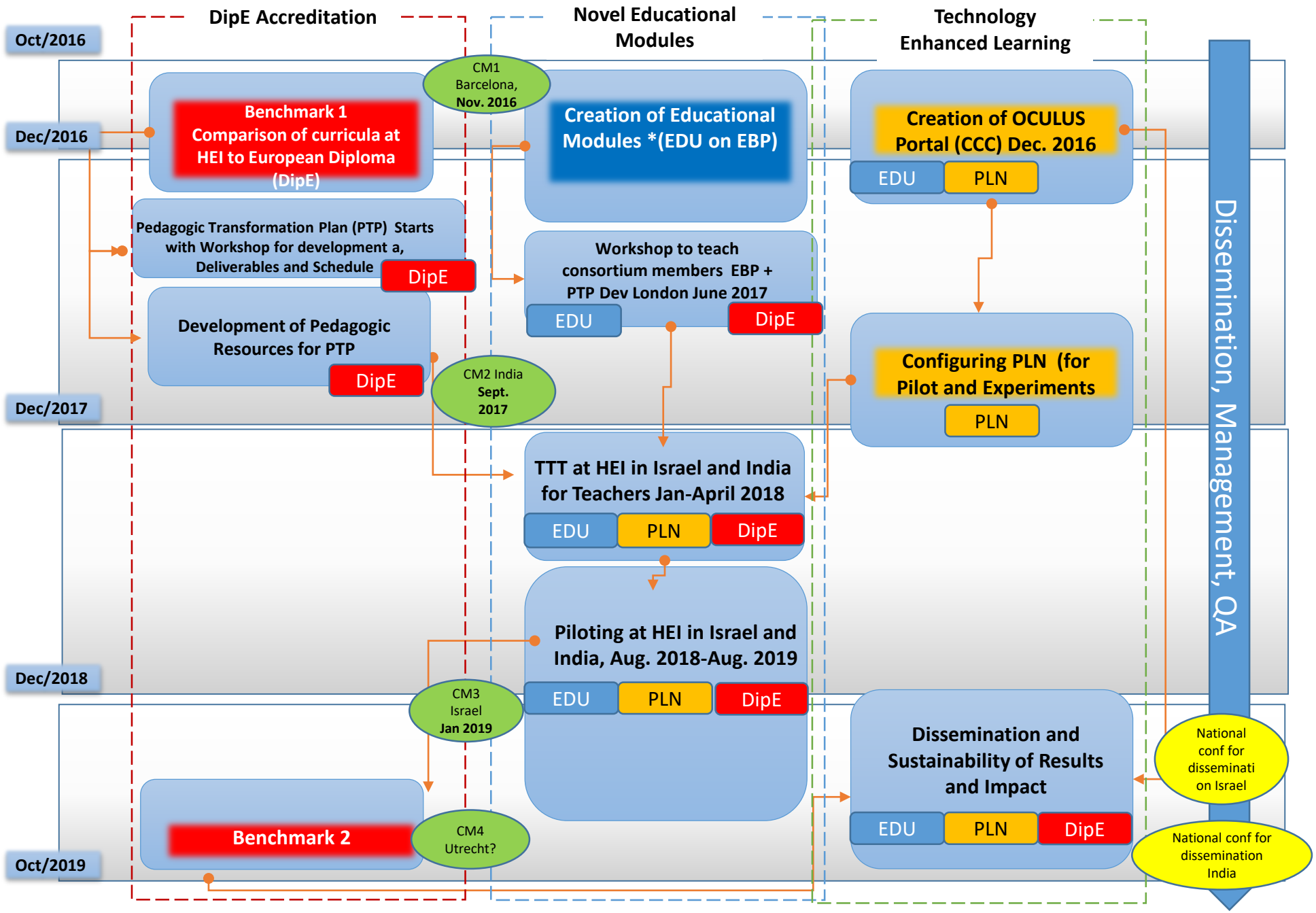

WCO Categories of Optometric Services
1. Optical Technology Services
2. Visual Function Services
3. Ocular Diagnostic Services
a) without drugs
b) with drugs
4. Ocular Therapeutic Services
dispensing
dispensing refraction prescription
dispensing refraction prescription screening for eye disease
dispensing refraction prescription diagnosis of eye disease using DPA's (diagnostics)
dispensing refraction prescription diagnosis of eye disease using DPA's (diagnostics) treatment of eye disease using TPA's (therapeutics)
dispensing refraction prescription diagnosis of eye disease using DPA's (diagnostics) treatment of eye disease using TPA's (therapeutics) eye surgery using laser
European Diploma
© Falko Grit 2006

Update optometry curriculum according to EBP (Evidence Based Practice)

- ✓ Use the most up to date information for best possible patient care.
- ✓ Encourage Life Long Learning.
- ✓ Better trained optometrists will lead to a reduction in blindness and vision impairment.


WP1 Preparation
1.1. Benchmarking Phase 1
1.2 Benchmarking Phase 2
WP2 Development
2.1 Development PTP
2.2 Development to meet DipE
2.3 Development EBP
2.4 Workshops TTT
2.5 Piloting in Israel
2.6 Piloting in India
2.7 Development Portal
2,8 Development PLN
WP 3 Quality Plan
3.1 Formation control comittee
3.2 Quality indicators
3.3 Develepment Quality control
3.4 Implementation quality control
WP4 Dissimination
4.1 Dissimination campain
4.2 Dissimination via Journals
4.3 Dissimination via meetings
4.4 Dissimination via WCO
4.5 National Conference India
4.6 National Conference Israel
4.7 Dissimination via assosiations
4.8 CM4 Norway
4.9 Sustainability
4.10 Handbook best practices
WP5 Management
5.1 Agreements and handbook
5.2 Governors' board
5.3 Control and monitoring
5.4 Communication
5.5 Financial report and auditing

OCULUS Consortium Flowchart



Progress overview and main outcomes

timeframe 15.10.2016-14-10.2019 (36 months total, time left: 5 months)

Workpackages		WP leader	Progress	Main outcome
WP1	WP1.1 Benchmarking to European Diploma (DipE) - phase 1	HIU Netherlands	Completed	Reports and preliminary GAP analysis
	WP1.2 Benchmarking to European Diploma - phase 2	BIU Israel	40 %	OSAT operational, data input into OSAT and a report generated
WP2	WP2.1 Development of the pedagogical transformation plan (PTP)	UPC Spain	100%	Pedagogical plan
	WP2.2 Delopment - Pedagogic Resource to meet DipE	HAC Israel	90%	Assessment rubrics and teaching material
	WP2.3 Development of Educational Resources for Evidence-based Practice (EBP)	CUL, UK	100 %	Teaching manual
	WP2.4 Workshops at HEIs in Israel and India for Teachers - Train The Teachers (TTT)	MU, India	100%	TTT completed
	WP2.5 Piloting in Israel	HAC, Israel	70%	Events and reports
	WP2.6 Piloting in India	UOH, India	70%	Events and reports
	WP2.7 Development - OCULUS Portal	SAP > CU, India	50 %	Functional website
	WP2.8 Development - PLN (Personal Learning Platform)	SAP > OUH, India	30 %	Preparations done
WP3	Quality Control and Monitoring	CUL, UK	70 %	CM tool and evaluations
WP4	Dissemination and exploitation plans	CU, India	70 %	Disseminations
WP5	Project management	USN, Norway	70 %	Minutes, Dropbox

Overview of WP and WP-leaders

WORK PACKAGE	TITLE	LO	(LEAD ORGANISATION)	CONTACT PERSONS
WP1.1	Benchmarking to European Diploma (DipE) - phase 1	HU	Hogeschool Utrecht	Annemarie Brouwer
WP1.2	Benchmarking to European Diploma - phase 2	BIU	Bar Ilan University	Uri Polat, Tzofia Simkovich
WP2.1	Development of the pedagogical transformation plan (PTP)	UPC	Universitat Politecnica de Catalunya	Joan Gispets
WP2.2	Delopment - Pedagogic Resource to meet DipE	HAC	Hadassah Academic College	Ariela Gordon-Shaag and Yael Fine
WP2.3	Development of Educational Resources for Evidence-based Practice (EBP)	CUL	City University London	Catherine Suttle
WP2.4	Workshops at HEIs in Israel and India for Teachers - Train The Teachers (TTT)	MU	Manipal University	Ramesh S Ve, Vidyut Rajhans
WP2.5	Piloting in Israel	HAC	Hadassah Academic College	Ariela Gordon-Shaag and Yael Fine
WP2.6	Piloting in India	UOH	University of Hyderabad	Nag Konda, Geeta Vemuganti
WP2.7	Development - OCULUS Portal	SAP>CU	Chitkara University	Preethi Pradhan, Keerti Pradhan
WP2.8	Development - PLN (Personal Learning Platform)	SAP>UOH	University of Hyderabad	Nag Konda, Geeta Vemuganti
WP3	Quality Control and Monitoring	CUL	City University London	Catherine Suttle
WP4	Dissemination and exploitation plans	CU	Chitkara University	Preethi Pradhan, Keerti Pradhan
WP5	Project management	USN	University of South-Eastern Norway	Bente Monica Aakre

Withdrawal of SAPIR – transfer of tasks and budget

WP	Sapir's task	Transfer of Sapir's tasks and remaining budget
1.1 and 1.2	OSAT tool	BIU will take over all work and remaining budget.
2.2	Pedagogical resources	Tasks and budget (staff costs) transferred to Hadassah (Sapir has done nothing here)
2.3	EBP	Remaining budget (staff costs) is moved to WP 2.8 (PLN) and assigned to Hyderabad.
2.5	Piloting in Israel	Remaining budget (travels) is transferred to Hadassah
2.6	Piloting in India	Remaining budget (travels) is transferred to Hyderabad
2.7	Portal	The remaining budget (staff costs) is shared between Chitkara (3/4) and USN (1/4). Move what is left of budget for equipment to Chitkara
2.8	PLN	Remaining budget (staff costs and equipment) is transferred to Hyderabad
4	Dissemination	Remaining budget (staff costs) is transferred to Chitkara
5	Management	The remaining budget (staff costs) is shared between USN and Hadassah

Pilots at HAC – WP2.5

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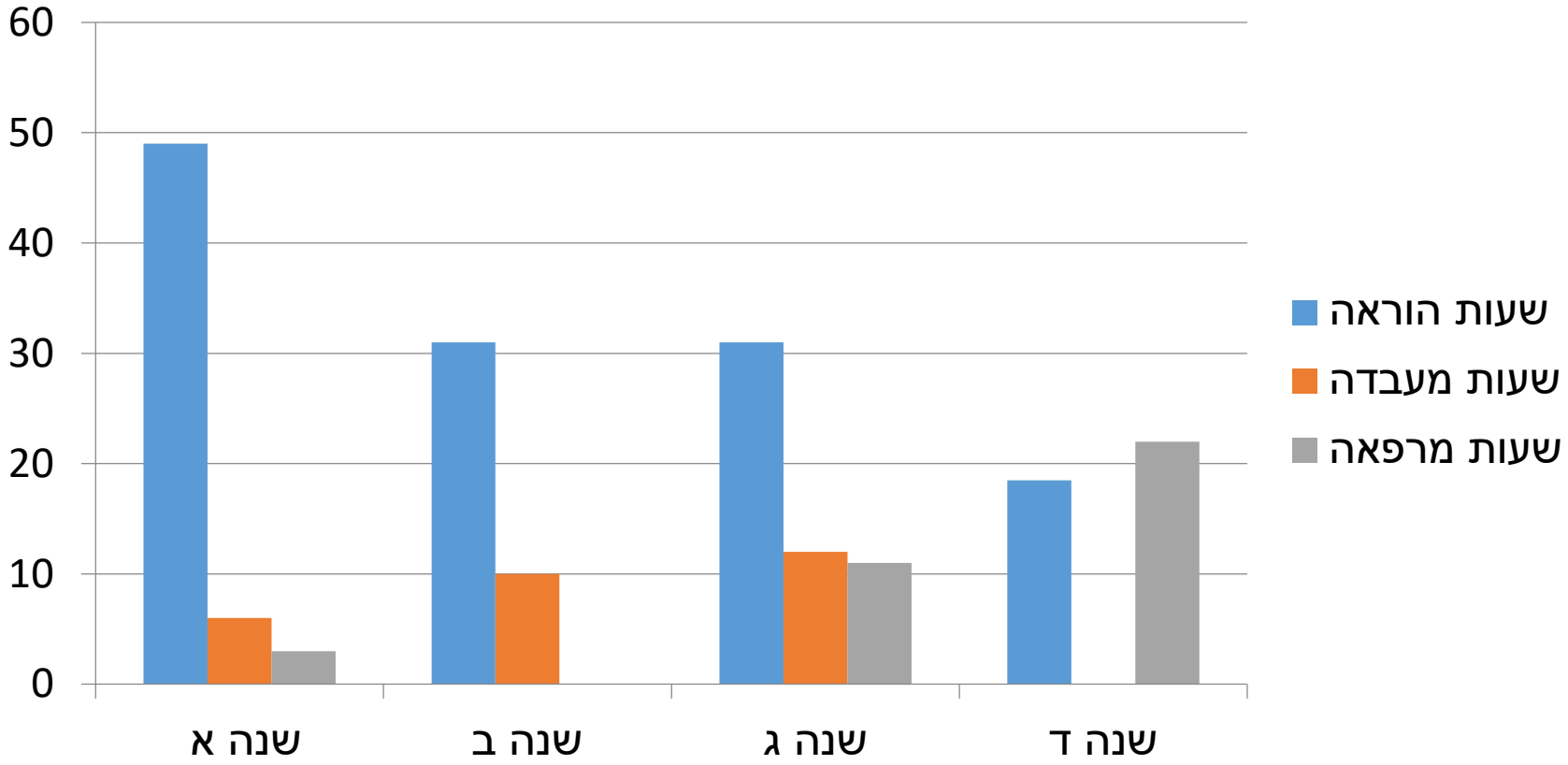
הוראה בחוג למדעי אופטומטריה 2019



Pilots at HAC in the Optometry Department:

Pedagogical Transformation Plan PTP

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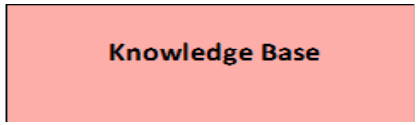
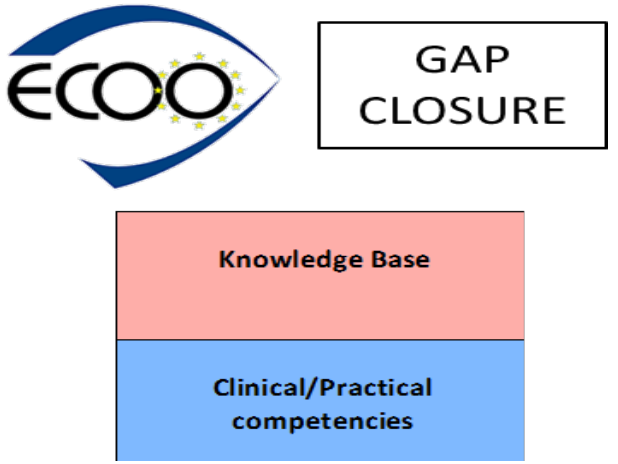
GAP CLOSURE

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**

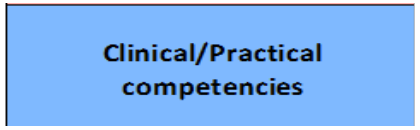
Pedagogical Transformation Plan PTP: First Year



- Microbiology and Immunology – change in the syllabus



Pedagogical Transformation Plan PTP: Second Year



- Optometry Technique Lab A - change in the syllabus

Pedagogical Transformation Plan PTP: Third Year

Clinical/Practical competencies

- Contact Lenses Laboratory A & B - change in the syllabus
- Advanced Optometry Laboratory A & B - new equipment
- General Clinics 3rd year - change in the assessment, new equipment, using diagnostic drugs

Knowledge Base

- Pediatric Optometry – change in the syllabus

ECOO

GAP CLOSURE

Pedagogical Transformation Plan PTP: Fourth Year

Clinical/Practical competencies

- General Clinics 4th year – change in the assessment, new equipment, using diagnostic drugs
- Contact lens clinic 4th year - change in the assessment
- Low Vision Clinic - **new course!**

ECOO

GAP CLOSURE

Pilots at HAC in the Optometry Department:

Evidence Based Practice EBP

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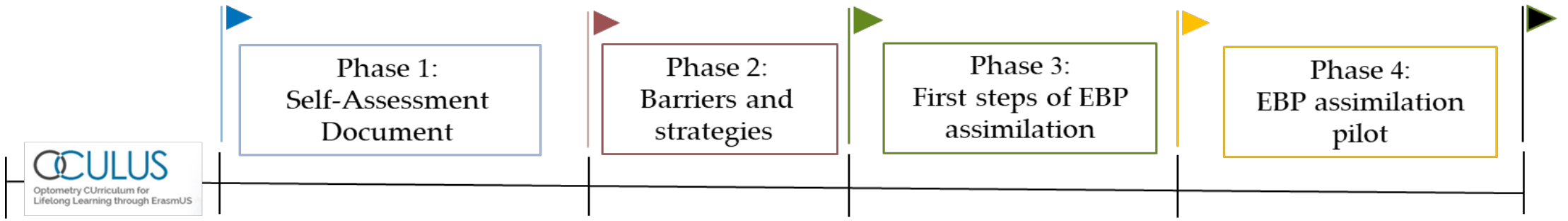
Timeline



November 2016

1st CM Barcelona

Preliminary work on assessment tool for EBP

June 2017

EBP Workshop London

EBP teaching methods

September 2017

2nd CM Hyderabad

EBP teaching assessment

February 2019

3nd CM Barcelona

EBP changes in curriculum & teaching

June 2019

4nd CM Barcelona

Summary

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Aim

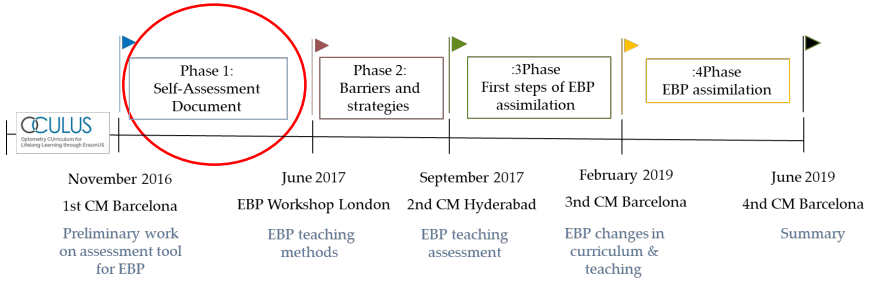
Assessment tool for EBP

Identifying learning and teaching strategies

Data collection

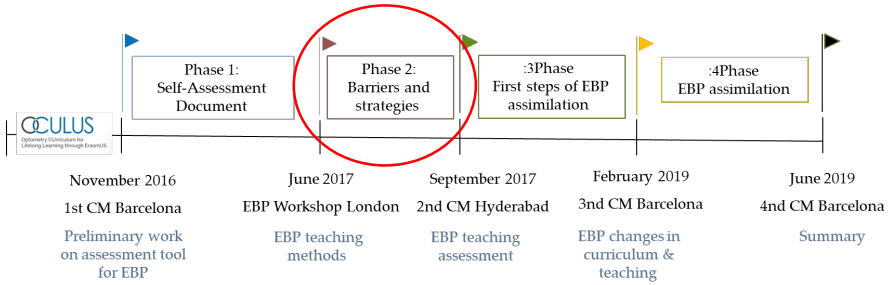
Changing existing strategies in various courses to meet EBP (if necessary) = Implementation

Phase 1:
Self-Assessment Document



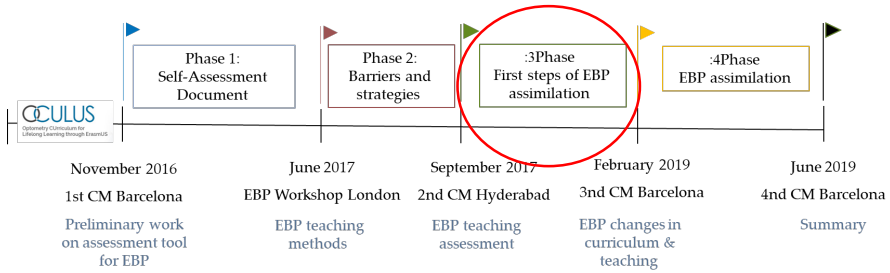
Course / Year	Semester	Teacher		Ask	Acquire	Appraise	Apply	Audit	Description Of Task
Module name: Year #			Knowledge	Are the students taught about research or clinical questions that are framed prior to searching for evidence (e.g. PICO)?	Are the students taught about finding research evidence relevant to a clinical or research question?	Are the students taught about appraising the research evidence?	Are the students taught about using the most valid and relevant evidence together with other factors (e.g. experience) in a clinical	Are the students taught about evaluating the process from Ask to Apply?	Here you can see a description in each box, prompting you and the module leader to consider whether the students are taught something, learn a skill, or are taught the importance of this skill. This will help you and the module leader to work out what to enter in the boxes below this, applying to each module.
			Skills	Are the students asked to form a research or clinical question (e.g. using PICO)?	Are the students asked to find research evidence that is relevant to a clinical or research question?	Are the students asked to appraise the research evidence?	Are the students asked to use the most valid and relevant evidence together with other factors in a clinical	Do the students know how to evaluate the process from Ask to Apply?	
			Attitude	Are the students taught the importance or value of framing a question prior to searching for evidence (e.g. PICO)?	Are students taught the importance or value of finding research evidence relevant to a clinical or research question?	Are the students taught the importance or value of appraising the research evidence?	Are the students taught the importance or value of using the most valid and relevant evidence together with other factors in a clinical	Are the students taught the importance or value of evaluating the process from Ask to Apply?	

Phase 2:
General strategies



- Overview of existing EBP teaching methods
- Overview of existing EBP teaching assessment

Phase 3:
EBP – Assimilation steps - Strategy



First year	Second year	Third year	Fourth year
Ask	Ask	Ask	Ask
Acquire	Acquire	Acquire	Acquire
	Appraise	Appraise	Appraise
		Apply	Apply
			Audit

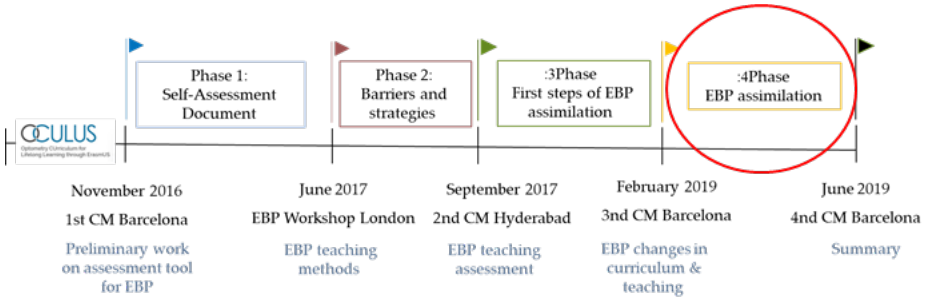
Phase 3:
EBP – Assimilation steps - Strategy

- Each lecturer / supervisor instructed on which stage of the EBP he should incorporate into his/her course.
- Workshops for lecturers
- Individual meetings
- EBP task

Phase 4:
Pilot - Implementation process - HAC

First year	Second year	Third year	Fourth year
Theoretical Optometry	Clinical Optometry A & B	Ocular Pathology A & B	Advanced Contact Lenses A & B
Optics	Binocular Vision A & B	Advanced Optometry A & B	Geriatric optometry
Clinical Optometry Lab	Visual Perception	Low vision	Clinical Seminar
External Clinics	Introduction to patient care	Contact Lenses A & B	Contact Lens A & B
	Visual neurophysiology	Vision Therapy A & B	Vision Therapy
		Pediatric Optometry and Low vision	Final project

Phase 4:
Pilot - Implementation process



Around 280 students at HAC took part in the pilot.

Changes made:

- At least one EBP assignment in the chosen courses (semester-related)
- Different tasks to create diversity
- An EBP assessment questionnaire at the beginning and end of the year

Lessons learned

- Most of the faculty members understand the importance / added value of integrating EBP in the study program

- The gradual process in which the changes are made in the various courses helps the students and the faculty members for both skill and implementation

Challenges:

- Implement EBP in additional courses
- Implement EBP attitude
- Develop EBP assessment tools

Clinical Changes at HAC

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Self-Assessment Document Competency Areas	Provisional Opinion	ECOO Comments
Subject 12: Investigative Techniques		Not clear where the final competency assessment takes place. No visual field experience
Subject 13: Paediatric Optometry		No evidence of assessment using diagnostic drugs

Use of New Equipment in Clinic

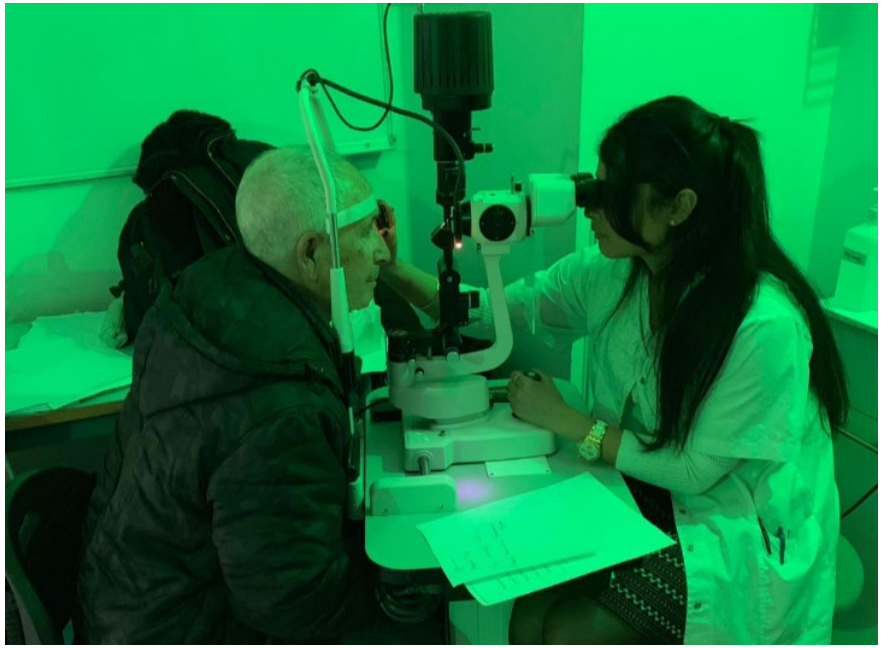
4th year Student number	FUNDUS CAMERA	OCT	VISUAL FIELDS
Average - all students (72)	1.8	1.5	1.9
STUDENTS WHO USED THE EQUIPMENT	42	15	22
% USED	58	21	31
NUMBER OF TIMES	72	22	42

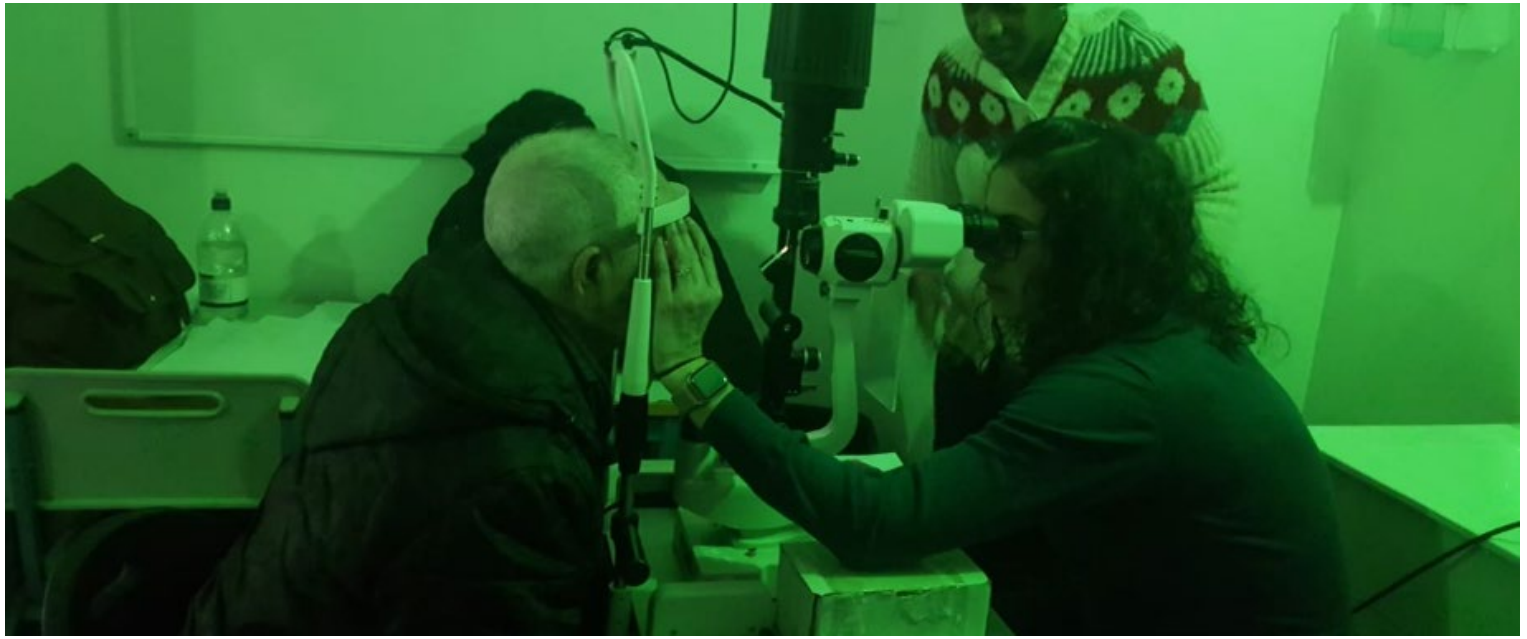
3rd year Student number	FUNDUS CAMERA	OCT	VISUAL FIELDS
Average - all students (62)	3.9	1.7	1.1
STUDENTS WHO USED THE EQUIPMENT	48	3	10
% USED	67	4	14
NUMBER OF TIMES	187	5	10

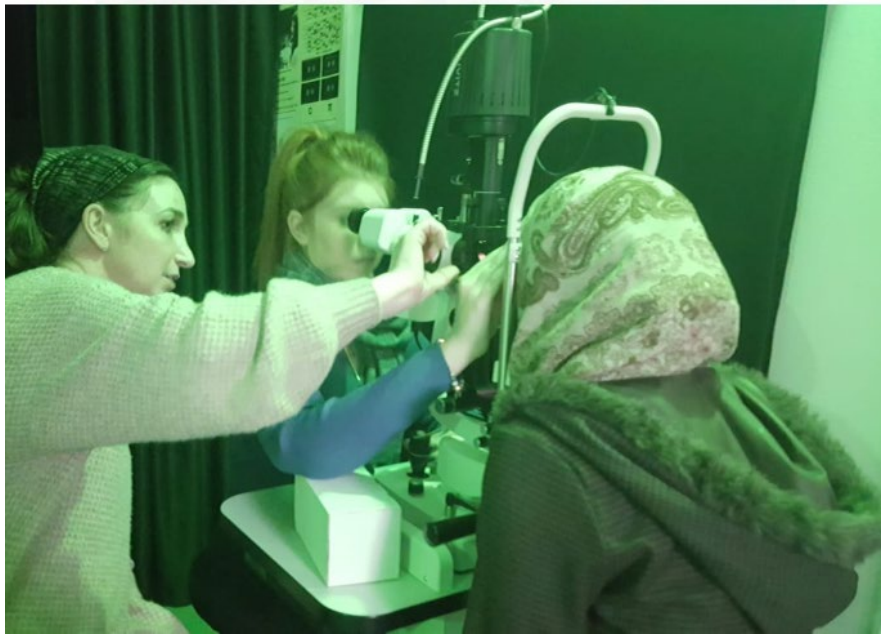
Investigative techniques in Clinic

4th year Student number	CYCLOPENTOLATE	MYDRAMIDE	SLIT LAMP BIOMICROSCOPY	BIO
Average - all students (72)	3.1	2.9	2.2	2.1
STUDENTS WHO USED THE EQUIPMENT	56	52	43	47
% USED	78	72	60	65
NUMBER OF TIMES	163	152	94	96

3rd year Student number	CYCLOPENTOLATE	MYDRAMIDE	SLIT LAMP BIOMICROSCOPY	BIO
Average - all students (62)	1.4	1	2.4	3
STUDENTS WHO USED THE EQUIPMENT	10	5	21	4
% USED	14	7	29	6
NUMBER OF TIMES	14	5	50	12







Grand Rounds

Grand Rounds

- Learning outcome: to recognize retinal disease and to gain competency in imaging the retina
- All 4th year students – N = 72
- 26 patients
- Dr. Rakhee Shah (CUL) supervised

Quantitative Assessment N = 43

	the pilot impacted my knowledge	the pilot impacted on my clinical competency	After the pilot I will be able to implement what I learned in my clinical practice	the pilot helped my self confidence in my ability to perform the things I learned in clinic
average	3.790697674	3.76744186	3.627906977	3.619047619
SD	0.709061739	0.718371482	0.756661081	0.824987242

Qualitative Assessment : positive aspects

to see pathologies first hand and to learn from the patients experience

experience with real patients

it was very interesting

It was very interesting, we saw patient with pathologies that we would not have seen.

excellent chance to see real patients with pathology and not just see in books

very interesting good cases

exposures to interesting pathologies. Some we only saw in textbooks

excellent that you brought patients to the college so we can get experience with pathologies

it was enrichign and interesting

exposure in practice to things we learned in theory

chance to see ocular pathology

patients wanted to share their experience, we learned a lot from the experience

chance to see ocular pathology

excellent

It was very good

clinical experience

very interesting

Very good experience. To see patients with ocular pathology and not just see pictures. To hear patients experiences

do it more often
Add more options for imaging the fundus such as OCT and fundus camera
more interesting cases
very good
do it more often
do it more often
do it more often
more pathologies
do it more often, bring patients with other types of pathologies
more types of pathologies
more types of pathologies
more types of pathologies
do it more often, more types of pathologies
smaller groups and more often so we can get more experience
none
more types of pathologies

Qualitative Assessment: negative aspects

Low Vision Clinic – new course

Subject 9: Low Vision		All students should have direct experience	Veronica Tzur	Purchase low vision equipment, recruit patients	Veronica is already an expert in low vision. However, we do not have a low vision clinic. We are setting one up.	We hope to open the clinic Nov. 2018

Low Vision Clinic – new course

- Low vision clinic was opened on October 2018
- The clinic takes place once a week
- All 4th year students –(N = 72) attend the clinic once and see one patient
- Learning outcome: The ability to examine an adult, low vision patient. Understanding the effect of ophthalmic conditions on impaired vision function.
- The ability to advise on the use ofasuitable low vision aid for functional improvement.

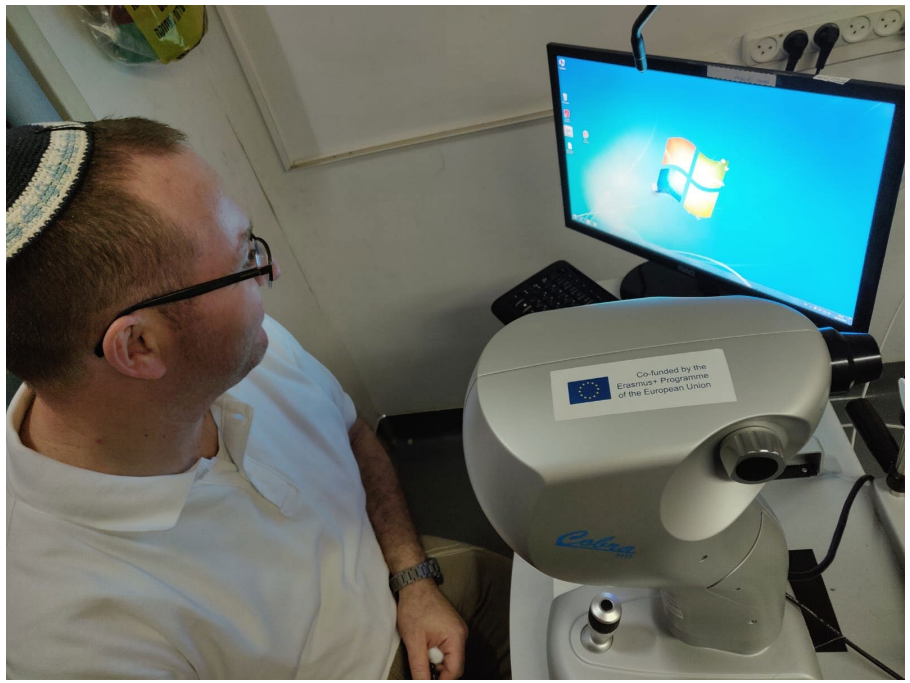
Low Vision Clinic – new course

- Due to the fact that the clinic is new in the department, in the first semester one patient was examined by two students. Following patient recruiting the number of referrals increased and in the second semester their was one patient for every student.
- In the future it is possible to increase the amount of patients every student examines by adding suitable examination rooms and supervisors.

- During the year student examined in the low vision clinic patient with: AMD (dry and wet), Diabetic retinopathy, RP, glaucoma, achromatopsia, progressive high myopic degeneration, keratoconus, AION, stargadts and post stroke hemianopsia.

New Equipment at HAC:

- Fundus Camera
- Visual Fields Analyzer
- OCT Optical coherence tomography



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Sustainability at HAC

- All changes are accredited, approved by the Pedagogy and Steering committees of the program
- All new modules are being and will be funded in the future by the HAC Dept. of Optometry yearly budget

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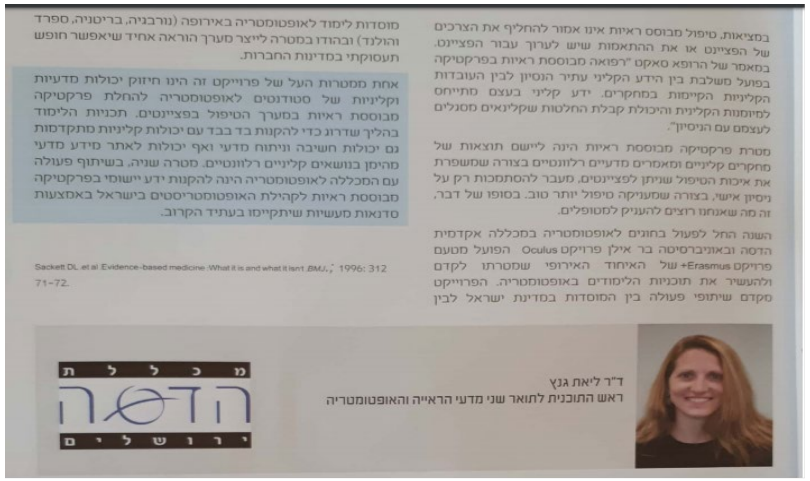
Dissemination in Israel by HAC

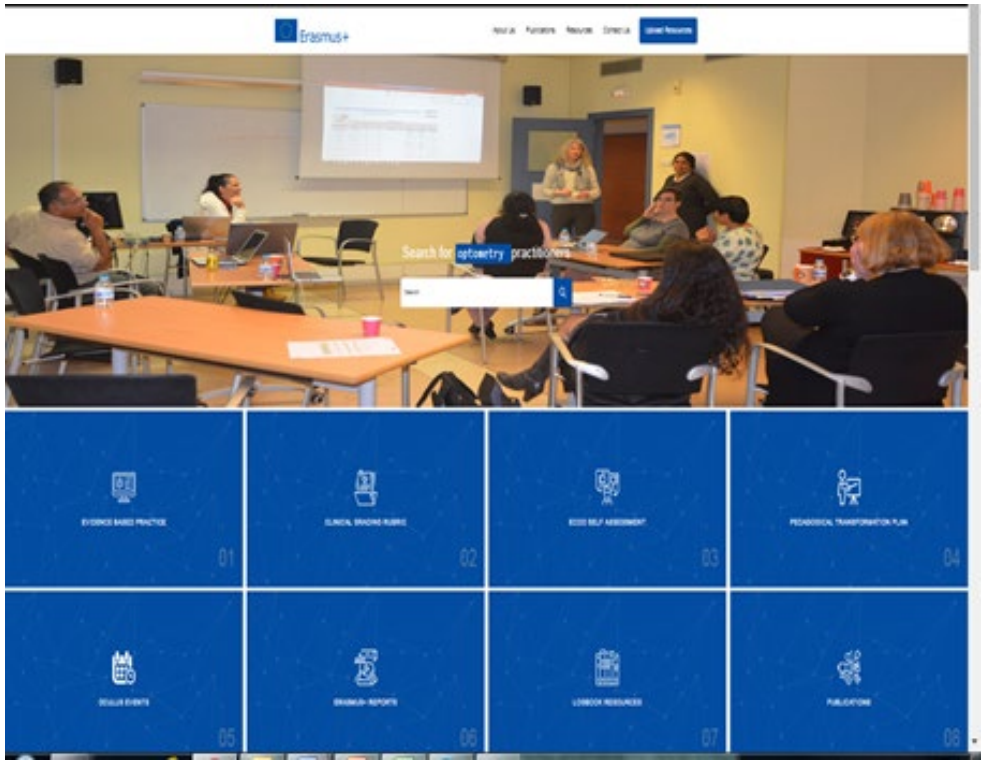
- Department of Optometry HAC: updates to faculty
- Department Head Meetings HAC
- National Optometry Conference
- Facebook
- ASSET National Conference
- Local optometry journal בגובה עיניים



Budget use HAC

	P. 5	p. 4	
		Total vs Budget %	Budget
Staff Costs	79.81%	59.92%	31306
Travel Costs and Costs of Stay	74.14%	52.82%	17330
Equipment Costs	100.00%	100.00%	50000
		0.00%	0
		93.98%	98636

PORTAL:
http://erasmus.itmatic.io/



Thank you

OCULUS Optometry CUrriculum for Lifelong Learning through ErasmUS

Erasmus+