Visual training for oculomotor, accommodation and binocular disfunctions Cód. A11

DIRECTION:

Dra. Dª Rafaela Garrido Mercado.

SCHOOL IN WHICH THE COURSE ENTERS:

Health School.

COURSE TIMETABLE:

9:00 to 14:00 hours, Monday to Friday.

NUMBER OF STUDENTS:

20.

STUDENT PROFILE:

Opticians-Optometrists. Optometry Students of the last 2 years of Bachelor in Optometry.

OBJETIVES:

- To analize optometric data and make clinical diagnosis.

- To be able to design a vision training program for oculomotor, accommodation and non strabismic binocular disfunctions.

- To adquire the knowledge about the theorical basis and clinical procedures for oculomotor, accommodationa and vergences visual training.

- To learn about the relationship between learning problems, visual disfunctions and visual information processing disfunctions.

SYLLABUS:

- **Diagnostic criterium of Accommodation, Oculomotor and non Strabismic Binocular Disfunctions.**
    - Review of optometric test to evaluate accommodation, ocular motility and binocular vision.
    - Basic neurological concepts about visual function.
    - Signs and symtoms of visual dysfunctions.
    - Diagnostic criterion of visual dysfunctions and differential diagnosis.
    - Treatment options of visual dysfunctions (lenses, prisms, adds, visual training).
    - Clinical reports.

- **Concepts in Visual Trainig.**

- General concept in visual training.
- Feedback mechanisms used in visual training.
- Visual Hygiene concepts.
- Scientific evidence in visual therapy. Results of clinical studies.

- **Accomodation Procedures of Visual Training.**
  - General concepts and feedback of accommodation visual training: SILO effect, procedures to increase and reduce visual demand, etc.
  - Accommodation visual training procedures: Bull´s eyes, bifocal rock, monocular near/far rock, monocular rock with negative lenses, near lens rock, mental minus, etc.

- **Vergences Visual Training Procedures.**
  - General concepts and feedback of vergence visual training.
  - Procedures to increase and reduce the demand in vergence training.
  - Vergence visual training procedures: Brock string, vectograms, anaglyphs, apertura rule, fusion cards, computer vergences, etc.
  - Antisupresive training.

- **Visual Training Programs Design.**
  - Programming for accommodation, and vergence training.

- **Oculomotor Visual Training.**
  - Oculomotor evaluation related to reading: DEM test, visagraph.
  - General concepts and feedback in oculomotor visual training.
  - Procedures to increase and reduce the demand in oculomotor training.
  - Procedures of oculomotor visual training:
  - Procedures to train fixation and pursuits: fixations targets, rotator, pursuits with string, Marsdem ball, etc.
  - Procedures to train saccadic movements: Hart chart saccades, near saccades, 4 chart drill, etc.
  - Computer pursuits and saccades procedures.
  - Design of visual training programs for oculomotor disfunctions.

- **Vision and Learning**
  - Relatioship of accommodation, oculomotor and non strabismic binocular dysfunctions with reading, atention and learning.
  - Relationship of visual procesing dysfunction with learning.
  - Visual procesing evaluation.
  - Procedures to train visual processing information.

PRACTICE-BASED ACTIVITIES:

- Clinical cases analysis.

- Practice of Accommodation procedures.

- Practice of Vergence procedures.

- Practice of oculomotor procedures.

- Practice of visual processing procedures.

- Design of visual training programs for visual disfuntions.

- Visit to Visual Training offices.

FACULTY:

- Dª Rafaela Garrido Mercado, UCM.
- Dª María García Montero, UCM.
- Dª Belén Llorens Casado, UCM.
- Dª Aiga Svede,University of Latvia, Letonia.
- D. Paolo Tacconella, Unvserity of Turin, Italia.