The Hebrew University of Jerusalem

Syllabus

Teaching practice - biology - 34105

Last update 16-08-2023

HU Credits: 8

Degree/Cycle: 2nd degree (Master)

Responsible Department: Teaching Training - Diploma

Academic year: 0

Semester: Yearly

Teaching Languages: Hebrew

Campus: E. Safra

Course/Module Coordinator: Ms. Orli Metzer Kahane

Coordinator Email: orli.metzer-kahane@mail.huji.ac.il

Coordinator Office Hours: Thursday 12:30-13:30

Teaching Staff:

Ms. Orli Metzer Kahane

Course/Module description:

The workshop is carried out at the Hebrew University Secondary School in Jerusalem, with complete cooperation of the schools management and teaching staff.
Each student will actively teach, on a weekly basis, Alone or with a partner, a consistent group of eighth grade students in the field of sciences.
The freshmen science curriculum includes topics of Ecology and Bacterial pathogeny and influences on humans.
The workshop consists of weekly meetings for the duration of a full academic year.
Weekly meetings include a group session held between 07:50 to 12:30 and personal meetings right after up to 13:00.
This is inclusive of the methodological workshop for biology teaching methods.
The studies will be conducted according to the vacations of the education system and will also take place during the semester vacation.
The workshop actively demonstrates educational methods in classes and includes pedagogical and didactic aspects.

Course/Module aims:

To give students hands on experience in different educational models and methodologies and to get acquainted with the schooling system.
Exposer to educational theories, Includes digital teaching models and practice teaching in different ways.
Introduction to the biology curriculum.
To provide necessary tools for diversifying educational methods.
To provide tools for planning laboratory lessons and teaching field trips.
To expose the world of real students, including students' difficulties with different styles of learning.
To provide necessary tools in class management and handling disciplinary problems during class.

Learning outcomes - On successful completion of this module, students should be able to:

Plan a lesson rich in content, which combines different thinking strategies and a variety of means and deliver it.

To deliver an interesting and comprehensive lecture.
To manage a class discussion.

Integrate various digital tools into teaching.
Plan and deliver a lesson adapted to remote teaching in Zoom [if necessary].

To select and process texts adapted to the students' level and the subject of study and prepare worksheets for students.
To build diagnostic tests.
To evaluate Biology students.

To deliver a lesson in a laboratory.
To deliver a field trip.
To deal with the provision of new material without predefined textbooks.

Attendance requirements(%):
Practical Teaching: 100%
Didactical meetings: 90%
Practical Teaching: 100%

Teaching arrangement and method of instruction: The workshops include lectures, sessions, feedback, discussions and simulations.
Watching movies together, watching teachers teach. Visiting different schools and an ecological tour in the field.

Course/Module Content:
Subject content is open to change depending on actual teaching.
Planning a lesson and building a lesson plan while integrating different thinking strategies.
Planning lesson opening and different attitude toward Home – Work. Different models for hybrid teaching (near and far).
Student – teacher communication:
Language and communication. An exercise that shows students' difficulties in understanding professional language. Analysis of the language used in science programs for children on television, in popular science books and in commercial discs.
Analysis of the language used in biology lessons and the difficulty arising from massive use of unknown and confusing terms.
Misconceptions in Biology
Feedback as an instrument for improving communication.

Coordination of expectations as an instrument.
Integrating social and emotional learning in the teaching of biology.
Discipline in class:
observations, case studies, personal dialogue with students.

The characteristics of correct thinking. The characteristics of the under privileged student and different teaching methods.
The gifted student and appropriate teaching methods.
Teaching through discovery versus verbal teaching. Inductive teaching and non inductive teaching.
The learning disabled student: difficulties and alternative teaching methods.

Gender differences in school. Boys / girls achievements in primary school and in secondary school. Interaction between teacher and boys/girls.

Education to values and life skills through biology: Sex education,
Healthy nutrition, Drugs, alcohol and addiction.

Biology and ethics: Integrating Ethics into the Biology

Teaching methods and techniques: Usage of videos for teaching, computers for biology teaching and newspaper reports in the classroom.
The conceptual map and Mind maps as a teaching method.
Team learning methods through Jigsaw.
Techniques for analysis of scientific texts.
Techniques for leading class discussions.
Creation of games as learning methods.
Planning laboratory lessons and co-work with lab technician.
Student assessment and alternative evaluation methods.
Visits to different schools in Jerusalem and Extra curricular activities: zoo, botanic garden.
Field trips: aims; strategies; different models.

<u>Required Reading:</u>
אתר מחוננים באינטרנט,
http://cms.education.gov.il/EducationCMS/Units/Gifted

תמיר, פ. (1989). הערכת הישגים לימודיים במדעי הטבע. המרכז הישראלי להוראת המדעים, האוניברסיטה העברית בירושלים.

בירנבוים, מ. (1997). חלופות בהערכת הישגים. תל אביב: רמות.

אמיר, ר. (2007) פרקים באקולוגיה. האוניברסיטה העברית, המרכז להוראת המדעים.

ברנהולץ, ח., פלד, ל., ווינקלר, ר. (2001). פרקים במיקרוביולוגיה ובמערכות הגנה. המרכז להוראת המדעים, האוניברסיטה העברית בירושלים.

סטאר, ס. ושותפיו. (2011). ביולוגיה - האחידות והמגוון של החיים, כרך א'. האוניברסיטה הפתוחה.

ברוקס, ז. ג. ברוקס, ג. מ.(2000). האומץ להיות קונסטרוקטיביסטי. חינוך החשיבה, 19.

נוסבוים, י, ויחיאלי, ת. (1998). תפיסות שגויות ושינוי תפיסתי בהוראת המדעים (מהדורה שנייה). מכון מופ"ת.

אמיר, ר., הירש, א. (2000) תפיסות שגויות והוראת הביולוגיה. המרכז להוראת המדעים, האוניברסיטה העברית בירושלים.

Additional Reading Material:

none

Grading Scheme:

Essay / Project / Final Assignment / Home Exam / Referat 25 %
Active Participation / Team Assignment 10 %
Submission assignments during the semester: Exercises / Essays / Audits / Reports / Forum / Simulation / others 15 %
Presentation / Poster Presentation / Lecture 30 %
Other 20 %

Additional information: