

Course Development and Learning Technologies

Developing study materials adapted to distance teaching is at the heart of the OUI academic endeavor. Course development functions within the framework of the office of the Dean of Development and Educational Technology, Prof. Sarah Guri-Rosenblit. The development process is lengthy, complex, and demanding. This endeavor involves OUI faculty members and editors with knowledge and experience in preparing materials for independent study, together with academics from other universities who are experts in their fields.

The Open University's classic textbooks serve as the basis for courses studied at most of Israel's higher education institutions. They are developed especially for OUI students and include various didactic aids, such as questions, summaries, comments and references. In addition to this traditional model, a wide range of course models have been developed in recent years, each unique in the way it presents academic content and pedagogical aids. Most of the courses are based on texts and printed learning materials, but the scope of digital materials grows yearly and includes recorded lectures, digitized anthologies, and e-books. Publishing professionals are involved in the production of all print materials, and experts in learning technologies are involved in the production of computer-based materials.

Courses Approved for Development and Revision

History, Philosophy, and Judaic Studies

Development:

Between Inclusion and Exclusion: Anti-Semitism, the European Nation State and the Jews
The Jewish Spring: The Awakening of Jewish Nationalism and the Origins of Zionism (1860-1920)
Seminar for Outstanding Students in Philosophy III
Women's Movements in the Modern Middle East

Revision:

Israeli Poetry of the 1950s
Europe: Cradle of Nationalism
History of Zionism: 1881-1914
Religion and State: Philosophical Aspects
Antisemitism in the 19th Century
Classical Greece
Russian Jewry and the Challenges of Modernity
The History of the Hellenistic World

Language, Literature, and the Arts

Development:

On the Threshold of Modernism: Nineteenth-Century Art and Society in Europe and America

Revision:

The Music of Johann Sebastian Bach
Music at First Sight
Hebrew Morphology
Theater and Society

Mathematics and Computer Science

Development:

Ordinary Differential Equations
Seminar on Defensive Systems Programming
Seminar on Cybersecurity
Distributed Algorithms for Communication Networks (MA)
CS Colloquium (MA)
Introduction to Natural Language Processing (MA)

Revision:

Numerical Analysis I
Numerical Analysis II
Final Project in Software Engineering
Discrete Mathematics: Set Theory, Combinatorics and Graph Theory
Measure Theory

Natural and Life Sciences

Development:

Genetics I
Genetics II
Selected Topics in Transition Organometallic Chemistry
Physical Organic Chemistry

Revision:

Definition of Life
Laboratory: Molecular Biology
Selected Topics in Biotechnology
Symbiosis

Vegetation of Israel
Receptors and Signal Transduction
Chemical Kinetics
Mammalian Reproduction
Ecology
Insects

Sociology, Political Science, and Communication

Development:

On Tigers and Dragons: International Relations in East Asia
Seminar for Outstanding Students: Sociology, Political Science, Communication
Seminar : Consumers, Business and Politics (MA)
Communication in Democratic Societies (MA)
Contemporary Liberal Democratic Theory and its Critics (MA)
Politics and Political parties in Europe in the Globalization Era (MA)

Revision:

Social Movements and Political Protest in Israel
The Human Commodity: Slavery and Slave Trade in and from Africa
Introduction to Political Thought
Democratic Regimes
Families: Sociological and Anthropological Perspectives
Local Government Law in Israel
Diplomatic History of the 20th Century: 1900-1945
Body and Culture (MA)
Anthropological and Sociological Approaches to Cultural Studies (MA)

Management and Economics

Development:

Monetary Economics
Political Economy
Advanced Seminar for Research (MA)

Revision:

Dynamics of Negotiation
Human Resource Management
Equal Opportunity and Non-Discriminatory Employment
Contemporary Theories of Economic and Social Justice
Introduction to Microeconomics
Taxation I
Intermediate Macroeconomics I
Intermediate Macroeconomics II
Seminar: Behavior in Organizations - Motives & Influence Methods (MA)

Education and Psychology

Development:

The Psychology of Negotiations

Revision:

Implementing Innovations in Educational Systems
Developmental Psychology
Physiology of Behavior
Psychopathology
Introduction to Psychology
Thesis Seminar I (MA)
Thesis Seminar II (MA)
Cyberspace Psychology: Educational Implications (MA)
Choice in Education: Schools and Alternative Processes (MA)
Research Methods in Education (MA)

Development of Learning Technologies

Learning environment and course sites

In 2015-2016, extensive improvements were made to the usability, accessibility and design of the learning environment:

Usability: Some of the upgrades included custom information indicators within the system (**My Moodle**); an exclusive faculty menu which directs users to relevant systems, and added links to the site's most useful sections.

Accessibility: A group of quick navigation mechanisms were developed for keyboard users (students with impaired eyesight or motor impairment). Other accessibility components were also added, including more complete labeling of each website page.

Graphic design: Course websites were upgraded and redesigned.

Online teaching

Over the past year, three earlier technologies were replaced by Ofek and Zoom. All video conference classes have now been converted into online Zoom classes. In the second semester of 2016, over 300 courses were offered in the online teaching model, 70% using Zoom, and 30% using Ofek. In all, 11,506 students enrolled in these groups. To facilitate student access to online and recorded sessions from the course sites, significant improvements have been made to the automation mechanism that transfers course and class information from Oracle to the learning environment.

Filmed courses

Filmed lectures are occasionally offered in place of course books and study guides. The learning content is presented visually and dynamically, and the appearance of the lecturer creates a sense of proximity. This model is a relatively fast alternative to traditional methods of developing or updating courses. This year, the quality of the filmed products was further upgraded with graphic animations that visualize the content, the inclusion of actors to produce "humor with an academic twist," and an added layer of interaction, including exercises, and "questions to think about" that improve the films' interactivity. Development

continued this year on the following courses: Alternatives in Assessment; Evolution; Diversity in Education: Theory and Practice; International Management; Introduction to Oceanography; Russian Jewry and the Challenges of Modernity; The Golem Legend from Late Antiquity to the Twentieth Century; Introduction to Mass Media, and Selected Works in Western Literature (flagship courses); Foundations of Business Law; Fundamental Questions on the Knowledge and Nature of Reality; and Brain and Cognition. New filmed courses recently added include: Plant Physiology; Visual Cognition; Introduction to Political Thought; Development of Language: From Infancy to Adulthood; Psychology in a Digital World; Classical Greece; States in the Age of Globalization; Anti-Semitism in the Nineteenth Century; Market Research for Managers; The History of Science; Women's Movements in the Modern Middle East; and Education Policy.

Introducing technology into flagship courses

For the two flagship courses, an exclusive concept was designed to lead students along a recommended sequence of various digital learning materials, including short animated video lectures, videotaped lectures by experts in the field, an enriched digital study guide, two translated digital books, and interactive questions for practice. In the Selected Writings in Western Literature course, thirty filmed lectures by experts in this field are being produced, some in the form of panels that include several lecturers. The lectures and other pedagogic materials will be structured as a dynamic timeline on the course website.

Subtitles to enhance filmed course accessibility

As part of the digital accessibility required in the learning environment and in online content, an accessibility pilot was conducted this year on filmed learning units. The pilot's purpose was to become acquainted with the work process, prepare a suitable technological infrastructure, and examine the cost involved.

Innovative learning technologies

Throughout the year, the OUI Center for Integration of Technologies in Distance Education (Shoham) has been testing new tools and the latest teaching and learning methods, which are integrated systematically into courses,

for use by faculty and students alike. First, existing academic or administrative needs are identified; next, a list of systems and comparison criteria is prepared. After a certain tool is chosen, a series of tests is carried out. The tests develop and expand gradually, to include a variety of courses and target populations. Each assessment is conducted methodically. Based on the evaluation results, improvements are made to the new tool, and it is integrated throughout the organization.

The following projects were tested last year:

- **Using Zoom in online teaching sessions:** Assessments proved successful, and the system has been broadly integrated throughout the OUI.
- **Roojoom:** This innovative tool by an Israeli startup company creates a uniform learning environment that presents all of the sources of information available on all devices and operating systems in a linear sequence. After a probe, and internal testing, it was concluded that the system has remarkable potential for producing and offering enriched digital textbooks and learning guides. Over the year, it was tested on several courses. This year the OUI signed a Design Partner contract with Roojoom, under which it will be able to influence the development of the educational product and serve as a beta site for the company during the product's development.

- **Enriched digital textbooks:** The digital learning materials currently produced by the OUI include textbooks, reading selections, study guides and filmed lectures. Recently, a need was identified for the enrichment of these materials with links to sites offering further information, video clips, etc. To this end, a new textbook model was developed that includes footnotes using QR-Code. This is a two-dimensional barcode into which textual information is encoded in graphic-visual form. Students reading the book are able to scan the code and access the relevant resources from their smartphones.

New Titles Produced by the OUI

Type	Title	Pages
Textbooks, final edition	43	12,381
Textbooks, provisional edition	61	13,092
Readers and study guides	95	23,764
Books converted to digital format	123	
Total	322	49,219

