

Friday 1 November 2019

09:00 – 17:00 | ARRIVAL OF PARTICIPANTS AND TRANSPORTATION TO THE HOTEL

17:00 – 18:00 | LAB TOUR, FAYOUM UNIVERSITY

Saturday 2 November 2019

Venue: Environmental and Smart Technology Group Faculty of Science, Fayoum University, Egypt

09:00 – 10:15 | **Lecture (1):**
Introduction to Solar Energy
Prof. Dr. Mohammad Mobin Shaikh, *IIT Indore, India*

10:15 – 10:30 | COFFEE BREAK

10:30 – 14:00 | **Practical Session (1)**
Water Station (G1)
Practical Session (2)
Pyranometer (G2)
Practical Session (3)
Solar Pathfinder (G3)

14:00 – 15:00 | LUNCH BREAK

15:00 – 17:00 | **Practical Session (4)**
Efficiency of Solar Cells Module (G2)
Practical Session (5)
Efficiency of Solar Cells Module (G2)
Practical Session (6)
Two-Axis Solar Tracking System (G3)

Sunday 3 November 2019

Venue: Environmental and Smart Technology Group Faculty of Science, Fayoum University, Egypt

09:00 – 10:15 | **Practical Session (7)**
Efficiency Measurement of a Solar Thermal Systems

10:15 – 10:30 | COFFEE BREAK

10:30 – 14:00 | **Practical Session (8)**
Design and Simulation of PV Systems Using Polysun Software (G1)
Practical Session (9)
Efficiency of Solar Thermal Collectors (G2)
Practical Session (10)
Efficiency of Photovoltaic Thermal Collectors (PVT) (G3)

14:00 – 15:00 | LUNCH BREAK

15:00 – 17:00 | **Practical Session (11)**
Chemical Oxygen Demand Measurement (G1)
Practical Session (12)
UV-Vis Spectroscopy Measurement (G2)
Practical Session (13)
Zetasizer Measurement (G3)

19:00 | DINNER

Monday 4 November 2019

Venue: Environmental and Smart Technology Group Faculty of Science, Fayoum University, Egypt

09:00 – 10:15 | **Lecture (3):**
Introduction to Membrane Science and Technology
Prof. Dr. Mathias Ulbricht, *University of Duisburg-Essen, Germany*
Prof. Dr. Yasuhiko Hayashi, *Okayama University, Japan*

10:15 – 10:30 | COFFEE BREAK

10:30 – 11:00 | **Practical Session (14)**
Synthesis of Anisotropic PES Membranes (G1)
Practical Session (15)
Synthesis of Isotropic PES Membranes (G2)
Practical Session (16)
Permeability Measurement by Deadend Filtration Cell (G3)

11:00 – 14:00 | **Practical Session (17)**
Pore Size Measurement (G1)
Practical Session (18)
Contact Angle Measurement (G2)

Practical Session (19)
Permeability Measurement by Crossflow Filtration Cell (G3)

14:00 – 15:00 | LUNCH

11:00 – 14:00 | **Practical Session (20)**
Wastewater Treatment by Molybdenum Disulfide Nanomaterials (G1)
Practical Session (21)
Oil-in-Water Emulsion Separation by Polymeric Membranes (G2)
Practical Session (22)
Oil-in-Water Emulsion Separation by Polymeric Foams (G3)

19:00 | DINNER

5-7 November 2019
International Workshop
Emergent Materials and Water-Energy Nexus
Venue: Academy of Scientific Research & Technology (ASRT), Cairo, Egypt

Friday 8 November 2019

Venue: Energy Materials Laboratory, American University in Cairo, Cairo, Egypt

14:00 – 15:30 | **Lecture (3):**
Solar Fuel Production
Prof. Dr. Nageh Allam, *AUC, Egypt & AGYA Member*

15:30 – 17:00 | **Lecture (4):**
Energy Storage Devices
Prof. Dr. Nageh Allam, *AUC, Egypt & AGYA Member*

17:00 – 17:30 | COFFEE BREAK

17:30 – 19:00 | **Lecture (5):**
Water Desalination
Prof. Dr. Nageh Allam, *AUC, Egypt & AGYA Member*

19:00 | DINNER

Friday 8 November 2019

Venue: American University Cairo (AUC)

10:00 – 11:30 **Lecture (6):**
Hybrid Energy Systems
Dr. Philipp Blechinger, *Reiner Lemoine Institute, Germany (via video conference) & AGYA Member*

11:00 – 12:00 | COFFEE BREAK

12:00 – 13:30 **Lecture (6):**
Hybrid Energy Systems
Dr. Philipp Blechinger, *Reiner Lemoine Institute, Germany (via video conference) & AGYA Member*

13:30 – 14:30 | LUNCH

14:30 – 17:00 **Group Discussion**

19:00 | DINNER

Saturday 9 November 2019

Venue: Pyramisa Suites Hotel Cairo

09:00 – 11:30 **Practical Session (23)**
Hands on Training on Solar Fuel Production Systems

11:30 – 12:00 | COFFEE BREAK

12:00 – 15:00 **Practical Session (24)**
Hands on Training on Energy Storage Systems
Dr. Mohamed Saber, *Texas A&M University, USA*

15:00 – 16:00 | LUNCH

16:00 – 19:00 **Practical Session (25)**
Hands on Training on Capacitive Deionization Systems

19:00 | DINNER

Sunday 10 November 2019

SCIENTIFIC EXCURSION WITH ALL STUDENTS AND TRAINERS

Workshop Organizers:

Ahmed Saad Goma Khalil
Fayoum University
Phillip Blechinger
Reiner Lemoine Institut

Training Venues:

Fayoum University
Tawfik Elhakim Street 1
63514 Al Fayyum, Egypt
American University Cairo
AUC Avenue, P.O. Box 74
New Cairo 11835, Egypt

Conference Hotel:

Shakshouk Fayoum Hotel
Bouhairat Qaroun Roud
Al Fayyum 63761 Egypt
Pyramisa Suites Hotel Cairo
60 Giza Street, Dokki
Cairo, Egypt

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Intensive Practical Training Course
of the Arab-German Young Academy
of Sciences and Humanities (AGYA)

Water-Energy Nexus: Concepts, Methodologies and Future Developments

2 – 10 November 2019

University, Fayoum, Egypt

American University Cairo, Cairo, Egypt

