

International Course for Sleep Technologists ICST-Shiraz (2020)



*Shiraz University
of
Medical Sciences*

School of Advanced Medical Sciences and Technologies



Department of Internal Medicine, Division of Pulmonology and Critical Care
Medicine/Department of Neuroscience, School of Advanced Medical
Sciences and Technologies, Shiraz University of Medical Sciences

In collaboration with:

- Baylor College of Medicine, Houston TX, USA
- Neuroscience Center, INDICASAT-AIP, Panama City, Republic of Panama
- DBHI/Iranian Neuroscience Society-Fars Chapter, Shiraz, Iran

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A-STEP Class Schedule: A 12-week certificate course designed to train Certified Polysomnography-PSG-Technologists (CPSGT)

A: Course Format:

Webinar/Seminar and Onsite Hands-on Practice

B: Course Venue:

- Nemazee Hospital Sleep Laboratory, Shiraz University of Medical Sciences, Shiraz, Iran
- Behavioral Sleep Disorders Unit, School of Advanced Medical Sciences and Technologies, Shiraz University of Medical Sciences, Shiraz, Iran
- Sleep Disorders Center, Ordibehest Hospital, Shiraz, Iran
- Sleep Health Unit, DBHI, Iranian Neuroscience Society, Fars Chapter, Shiraz, Iran

C: Course Co-directors:

Prof. Amir Sharafkhaneh,

Sleep Disorders Fellowship, Prof. of Pulmonology and Critical Care Medicine, Baylor College of Medicine, Houston, TX, USA

Dr. Samrad Mehrabi

Sleep Disorders Fellowship, Assistant Prof. of Pulmonology and Critical Care Medicine, Shiraz University of Medical Sciences, Shiraz, Iran

Dr. Mohammad Nami

Sleep Disorders Fellowship, Assistant Prof. of Neuroscience, Shiraz University of Medical Sciences, Shiraz, Iran

D: Contributing Moderators/Faculty:

Dr. Azita Tavallaie

Anesthesiologist, Sleep Disorders Center, Ordibehest Specialty Hospital, Shiraz, Iran

Prof. Asadollah Zarifkar

Professor of Medical Physiology, Shiraz University of Medical Sciences, Shiraz, Iran

Dr. Hadi Aligholi

Assistant Prof. of Neuroscience, Shiraz University of Medical Sciences, Shiraz, Iran

Dr. Ali Davarpanah

Assistant Prof. of Infectious Diseases and Tropical Medicine, Shiraz University of Medical Sciences, Shiraz, Iran

Prof. KSJ Rao

Prof. of Neuroscience, Neuroscience Center, INDICASAT-AIP, Panama City, Republic of Panama

Course Schedule

Week 1: Thursday, April 16 – Friday, April 17, 2020	
Topic	Presenter
Introduction to Course Content/ Orientation	Prof A. Sharafkhaneh
Syllabus Review	Dr. M. Nami
Introduction to Polysomnography	Dr. M. Nami
The Sleep Technologist's Role	Dr. S. Mehrabi
Patient Nursing Care and Safety	Dr. A. Tavallaie
Medical Ethics, Professional Behavior, Dress code	Dr. M. Nami
HIPAA	Dr. S. Mehrabi
Infection Control	Dr. Ali Davarpanah
Emergency Protocols	Dr. A. Tavallaie
History of Sleep Medicine & Sleep Architecture	Prof A. Sharafkhaneh
EEG Pattern Recognitions	Dr. M. Nami
Medical Terminology in Polysomnography	Dr. S. Mehrabi
Documentation & Chart Review	Prof A. Sharafkhaneh
Summarizing the PSG & Introduction to Calculation	Prof A. Sharafkhaneh

Week 2: Thursday, April 23 - Friday, April 24, 2020	
Topic	Presenter
Review of PSG Calculations	Prof A. Sharafkhaneh
Overview of Sleep Disorders	Dr. S. Mehrabi
Neurobiology of Sleep	Prof. KSJ Rao
Effects of Sleep Deprivation	Dr. H. Aligholi
Anatomy and Physiology of Breathing /Mechanics of Breathing	Prof A. Sharafkhaneh
Anatomy & Physiology of the Central Nervous System	Dr. M. Nami
Anatomy & Physiology of the Musculoskeletal System	Prof. A. Zarifkar
The Cardiovascular System	Dr. S. Mehrabi
Somnopharmacology	Dr. M. Nami

Week 3: Thursday, April 30 – Friday, May 1, 2020	
Topic	Presenter
Instrumentation, Sensitivity, Filters, Time Constant	Prof. A. Sharafkhaneh
Ancillary Equipment	Dr. M. Nami
Theory of Operation of Oximeters	Dr. M. Nami
Polygraph Calibration	Dr. S. Mehrabi
Introduction to PAP Titrations	Dr. S. Mehrabi
Introduction to Non-invasive Ventilation	Dr. S. Mehrabi
Introduction to Oxygen Titration	Dr. A. Tavallaie

Week 4: Thursday, May 7 - Friday, May 8, 2020	
Topic	Presenter
Hardware and Software Calibration	Prof. A. Sharafkhaneh
Aliasing, Screen Resolution, Sampling Rate	Prof. A. Sharafkhaneh
Data Acquisition & Equipment Interface	Prof. A. Sharafkhaneh
Montage Development	Dr. M. Nami
Artifact Recognition and Response	Dr. M. Nami
Patient Interaction during Recording	Dr. S. Mehrabi
Responding to Critical Events	Dr. S. Mehrabi
Responding to Sleep Disorders (e.g. Parasomnias)	Dr. M. Nami
Pediatric Polysomnography	Dr. M. Nami
Recording Montages (Baseline, CPAP, Split)	Dr. S. Mehrabi
Ancillary Equipment & Placement of Ancillary Monitors	Dr. S. Mehrabi
10-20 System of Electrode Placement	Dr. M. Nami
Documentation during Recording	Prof. A. Sharafkhaneh

Week 5: Clinical Observation (May 9 - May 15, 2020)		
Cluster	Time	Activity
A	7:00 p.m. – 11:00 p.m. (two nights)	Practical Observation in the Nemazee Hospital Sleep Lab., SUMS
B	7:00 p.m. – 11:00 p.m. (two nights)	Practical Observation in BSDU-SUMS Sleep Lab./DBHI
C	7:00 p.m. – 11:00 p.m. (two nights)	Practical Observation in Ordibehest Hosp. Sleep Center

Week 6: Thursday, May 21 - Friday, May 22, 2020

Topic	Presenter
PSG Record Scoring (Sleep Staging, Arousal, Respiratory, Cardiac and Movement Scoring)	Dr. M. Nami
10-20 System of Electrode Placement	Dr. M. Nami
Abnormal EEG and Seizure Recognition	Dr. M. Nami
Movement Disorders	Dr. M. Nami
Circadian Rhythm Disorders	Dr. S. Mehrabi
Seizure Disorders and Interventions	Dr. M. Nami
Recognition of Cardiac Arrhythmias	Dr. S. Mehrabi
Quality Assurance	Prof. A. Sarafkhaneh
Data Storage	Prof. A. Sarafkhaneh
Intra-scorer Reliability	Prof. A. Sarafkhaneh
MSLT & MWT	Prof. A. Sharafkhaneh
Review PAP Titrations	Dr. S. Mehrabi

Week 7: Night shifts – 9:00 p.m. – 7:00 a.m. (May 23 - May 29, 2020)

Cluster	Time	Activity	Course Content
A	9:00p.m. – 7:00 a.m. (two nights)	Practical Observation, BSDU-SUMS Sleep Lab./DBHI	<ul style="list-style-type: none"> ◆ EEG Pattern Recognition ◆ Vital Signs ◆ Clinical Observation & 10-20 System of Electrode Placement ◆ Polysomnography in the Laboratory ◆ PAP Titration Polysomnography ◆ Electrode Placement & Ancillary Equipment Placement ◆ Polygraph Calibration ◆ Clinical Observation & Documentation ◆ Equipment Cleaning & Sterilization
B	9:00p.m. – 7:00 a.m. (two nights)	Practical Observation, Ordibehest Hosp. Sleep Center	
C	9:00p.m. – 7:00 a.m. (two nights)	Practical Observation, Nemazee Hosp. Sleep Lab.	

Week 8: Night shifts – 9:00 p.m. – 7:00 a.m. (May 30 - Jun 5, 2020)

Cluster	Time	Activity	Course Content
A	9:00p.m. – 7:00 a.m. (two nights)	Practical Observation in Ordibehest Hosp. Sleep Center	<ul style="list-style-type: none"> ◆ 10-20 System of Electrode Placement ◆ PSG Monitoring Techniques ◆ CPAP/BPAP Titrations
B	9:00p.m. – 7:00 a.m. (two nights)	Practical Laboratory Observation in Nemazee Hospital Sleep Lab., SUMS	
C	9:00p.m. – 7:00 a.m. (two nights)	Practical Laboratory Observation in BSDU- SUMS Sleep Lab./ DBHI	

Week 9: Clinical Observation – 3:00 p.m. – 9:00 p.m. (Jun. 6 – Jun. 12, 2020)

Cluster	Time	Activity	Course Content
A	3:00 p.m. – 9:00 p.m.	Practical Observation, Ordibehest Hosp. Sleep Center	<ul style="list-style-type: none"> ◆ PSG Record Scoring (Sleep Staging, Arousal, Respiratory, Cardiac and Movement Scoring) ◆ Record Review ◆ Patient Monitoring
B	3:00 p.m. – 9:00 p.m.	Practical Observation, Nemazee Hosp. Sleep Lab., SUMS	
C	3:00 p.m. – 9:00 p.m.	Practical Observation, BSDU-SUMS sleep Lab./DBHI	

Week 10: Clinical Observation – 3:00 p.m. – 9:00 p.m. (Jun. 13 – Jun. 19, 2020)

Cluster	Time	Activity	Course Content
A	3:00 p.m. – 9:00 p.m.	Practical Observation in BSDU-SUMS sleep Lab. /DBHI	<ul style="list-style-type: none"> ◆ Cardio-Respiratory Polysomnography ◆ Movement Disorders and Parasomnia ◆ Patient Monitoring
B	3:00 p.m. – 9:00 p.m.	Practical Observation in Ordibehest Hosp. Sleep Center	
C	3:00 p.m. – 9:00 p.m.	Practical Observation in Nemazee Hosp. Sleep Lab., SUMS	

Week 11: Thursday, Jun. 25 - Friday, Jun. 26, 2020	
Topic	Presenter
How to Do Teamwork	Dr. S.Mehrabi/ Dr. M. Nami
How to Manage a Sleep Center	Prof. A. Sharafkhaneh/ Dr. M. Nami

Week12: Thursday, Jul 2- Friday, Jul 3, 2020	
Topic	Presenter
Course Review	The Panel
Miscellaneous Instruction	The Panel
Final Examination	The Examination Board