

AA Optional Courses

Course Code	Course Description	Duration	Course Fee
AA-2	Flame Micro Sampling Technique Operating of AA-7000 Flame Micro Sampling mode Additional Requirement(s): Familiarity with the operation of AA-7000	1 day(s)	SGD \$600 (per person)

The optional AAS application training courses will also be conducted for existing users of Shimadzu AA-7000 if the additional requirement(s) and the following requirement(s) are fulfilled:

- A minimum of 2 organizations and/or a minimum of 4 participants have registered
- Participants should have basic knowledge of AAS concepts
- Participants should have some experience in operating Shimadzu AA-7000

Please enquire to your Shimadzu representative if you are interested to register to the training course.

FTIR Optional Courses

Course Code	Course Description	Duration	Course Fee
FTIR-3	RoHS with FTIR Introduction of RoHS regulation for Brominated Flame Retardants. Practical session of FTIR measurement with RoHS software.	1 day(s)	SGD \$600 (per person)
FTIR-4	Interpretation of IR Spectra Introduction of IR spectrum and IR peak. Interpretation of IR spectrum and peaks with spectral search software and manually. Creating library.	1 day(s)	SGD \$600 (per person)
FTIR-5	Mapping Program for FTIR Microscope Principles and operation of FTIR microscope sessions. Operation is included, normal measurement mode and mapping mode. Method: Transmission/ Reflection/ATR.	1 day(s)	SGD \$600 (per person)

These optional FTIR application training courses will also be conducted for existing users of Shimadzu FTIR Series if the additional requirement(s) and the following general requirement(s) are fulfilled:

- A minimum of 2 organizations and/or a minimum of 4 participants have registered
- Participants should have basic knowledge of FTIR concepts
- Participants should have some experience in operating Shimadzu FTIR Series

Please enquire to your Shimadzu representative if you are interested to register to any of these training courses.

GC Optional Courses

Course Code	Course Description	Duration	Course Fee
GC-2	GC detectors and selection for different applications Topic: Introduction to Thermal Conductivity Detector (TCD), Electron Capture Detector (ECD), Flame Thermionic Detector (FTD), or Flame Photometric Detector (FPD). <i>(1/2 day per detector)</i>	0.5 day(s) <i>(per detector)</i>	SGD \$500 <i>(per person)</i>
GC-3 / GCMS-3	Headspace Analysis using AOC-5000 Topic: Headspace technique and operation of AOC-5000 for headspace analysis.	0.5 day(s)	SGD \$500 <i>(per person)</i>
GC-4 / GCMS-4	Headspace Analysis using HT-3 Topic: Headspace technique and operation of HT-3 for headspace analysis.	0.5 day(s)	SGD \$500 <i>(per person)</i>
GC-5 / GCMS-5	Thermal Desorption Analysis using TD-20 Topic: Principles and operation of TD-20.	1 day(s)	SGD \$500 <i>(per person)</i>
GC-6 / GCMS-6	Double-shot Pyrolysis Analysis using PY-2020iD Topic: Principles and operation of PY-2020iD.	0.5 day(s)	SGD \$500 <i>(per person)</i>

We can conduct these optional GC training courses for users of Shimadzu GC-2010 series, provided the following requirement(s) are fulfilled:

- A minimum of 2 organizations and/or a minimum of 4 participants have registered to the course.
- Participants who register have had basic knowledge of GC principles.
- Participants who register are familiar with the basic operation of Shimadzu GC-2010/GC-2014 and GCsolution.
- Participants should have the optional equipments or accessories (depending on the training course).

GCMS Optional Courses

Course Code	Course Description	Duration	Course Fee
GCMS-3 / GC-3	Headspace Analysis using AOC-5000 Topic: Headspace technique and operation of AOC-5000 for headspace analysis.	0.5 day(s)	SGD \$500 (per person)
GCMS-4 / GC-4	Headspace Analysis using HT-3 Topic: Headspace technique and operation of HT-3 for headspace analysis.	0.5 day(s)	SGD \$500 (per person)
GC-5	Thermal Desorption Analysis using TD-20 Topic: Principles and operation of TD-20.	1 day(s)	SGD \$600 (per person)
GCMS-6 / GC-6	Double-shot Pyrolysis Analysis using PY-2020iD Topic: Principles and operation of PY-2020iD.	0.5 day(s)	SGD \$500 (per person)
GCMS-7	Chemical Ionization GC/MS Topic: Principles and operation of chemical ionization for GCMS-QP2010 series (except S series).	1 day(s)	SGD \$600 (per person)

We can conduct these optional GC/MS training courses for users of Shimadzu GCMS-QP2010 series, provided the following requirement(s) are fulfilled:

- A minimum of 2 organizations and/or a minimum of 4 participants have registered to the course.
- Participants who register have had basic knowledge of GC/MS principles.
- Participants who register are familiar with the basic operation of Shimadzu GCMS-QP2010 or GCMS-QP2010 Plus and GCMSsolution.
- Participants should have the optional equipments or accessories (depending on the training course).

HPLC Optional Courses

Course Code	Course Description	Duration	Course Fee
HPLC-4	Advanced Features of LCsolution Software Topic: In-depth course for LCsolution users to further develop skills on LCsolution such as QA/QC functions, system suitability, user program, batch summary report, etc.	1 day(s)	SGD \$600 (per person)
HPLC-5	Gel Permeation Chromatography Topic: GPC techniques and data processing using Shimadzu GPC software.	½ day(s)	SGD \$500 (per person)
HPLC-6	Ion Chromatography Topic: Principles and operation of IC with LCsolution workstation.	1 day(s)	SGD \$600 (per person)
HPLC-7	Amino Acid Analyzer Topic: Principles and operation of amino acid analysis based on Post-column derivatization method.	1 day(s)	SGD \$600 (per person)
HPLC-8	Various HPLC detectors and selection for different applications Topic: Introduction of PDA and other detectors including evaporative light scattering detector (ELSD), refractive index detector (RID) and fluorescence detector (RF); Effective use of PDA in qualitative analysis by peak purity, UV-Vis spectrum library and 3-D data views etc.	1 day(s)	SGD \$600 (per person)
HPLC-9	Lab Data Management System: CLASS-Agent Topic: Introduction to 21 CFR Part 11 compliance and CLASS-Agent system. Include hands-on session on operation of CLASS-Agent with Shimadzu HPLC and other analytical instruments.	1 day(s)	SGD \$600 (per person)

The following optional HPLC training courses will also be conducted for existing users of Shimadzu HPLC if the following general requirements and the additional requirement(s) are fulfilled:

- A minimum of 2 organizations and/or a minimum of 4 participants have registered
- Participants should have the equipments or accessories related to the training course
- Participants should have basic knowledge of HPLC concepts

Please enquire to your Shimadzu representative if you are interested to register to any of these trainings.

TOC Optional Courses

Course Code	Course Description	Duration	Course Fee
TOC-3	TOC in Solid Samples Using the SSM-5000A Topics: Operation of SSM-5000A WITH TOC-Vcs series Additional Requirement(s): Familiarity with the operation of TOC-Vcs series	1 day(s)	SGD \$600 (per person)
TOC-4	TOC in Solid Samples Using the SSM-5000A Topics: Operation of SSM-5000A with TOC-Vcp series Additional Requirement(s): Familiarity with the operation of TOC-Vcp series	1 day(s)	SGD \$600 (per person)

These optional TOC application training courses will also be conducted for existing users of Shimadzu TOC-Vcs or TOC-Vcp series if the additional requirement(s) and the following general requirement(s) are fulfilled:

- A minimum of 2 organizations and/or a minimum of 4 participants have registered
- Participants should have basic knowledge of TOC concepts
- Participants should have some experience in operating Shimadzu TOC-Vcs or TOC-Vcp Series

Please enquire to your Shimadzu representative if you are interested to register to any of these training courses.

UV-Vis Optional Courses

Course Code	Course Description	Duration	Course Fee
UV-3	Fundamentals of UV-Vis-NIR (UV-3600) Topics: Theory , principle and application of UV-VIS-NIR Spectroscopy. Practical sessions of UV-3600.	1 day(s)	SGD \$600 (per person)
UV-4	RoHS with UVmini-1240 Topics: Introduction of RoHS regulation for Hexavalent Chromium. Practical session of UVmini with Water Analysis Program Pack.	1 day(s)	SGD \$600 (per person)
UV-5	Fundamentals of UV-Vis (BioSpec-mini) Topics: Introduction of UV-Vis in DNA/Protein Analysis, and Tm Analysis System. Practical session of Biospec-mini.	1 day(s)	SGD \$600 (per person)
UV-6	Color Measurement Topics: Introduction and application of Color Measurement Software. Practical sessions for UVPC Color Analysis.	1 day(s)	SGD \$600 (per person)

These optional UV-Vis application training courses will also be conducted for existing users of Shimadzu UV-Vis if the following general requirement is fulfilled:

- A minimum of 4 participants have registered

Please enquire to your Shimadzu representative if you are interested to register to any of these training courses.