



VIDEO & SUPPLEMENTARY MATERIAL POSTING

[FACULTY: Dr. Parthasarathi Panda \(PSP\)](#)

PROGRAM: B. PHARM.

AY 2020-21 (EVEN SEMESTER)

Course Code: PT-810C

Course Name: *Advanced Instrumentation Techniques*

Suggested Books for the Course (with links):

Sl. No.	Book Name, Ed., Vol	Authors	Weblink(s)
1.	Spectrometric Identification of Organic Compounds, 7 th Edn, John Wiley & Sons, Inc., New York, USA, 2005	Silverstein R.M., Webster F.X., Kiemle D.J.	Click Here
2.	Pharmaceutical Analysis- A Textbook for Pharmacy students and Pharmaceutical Chemists, 3 rd Edn., Churchill Livingstone, Elsevier, Edinburgh, UK, 2012	Watson D.G	Click Here
3.	Instant Notes Analytical Chemistry, BIOS Scientific Publishers Limited, Oxford, UK. 2002	Kealey D. Haines P.J.	Click Here
4			

(add more rows if needed)

Supplementary Materials for Reference and Self Study: *(add more rows if needed)*



Date	Module (as per Lesson Plan)	Topic	Live Recording Link	Powerpoint Presentation Link	Supplementary Notes / Resources	Remarks, if any
16-04-2021	-	Introduction to Advanced Instrumentation Techniques	Youtube Link	PPT	NOTES	
23-04-2021	I	Introduction to NMR and its Principle	Youtube Link	PPT	NOTES	Other Resources
24-04-2021	I	Instrumentation and Working of NMR Spectroscopy	Youtube Link	PPT	NOTES	Other Resources
28-04-2021	I	NMR Spectroscopy: Relaxation, shielding and deshielding, Number of Signals, Positions of Signals	Youtube Link	PPT	NOTES	Other Resources YouTube link
30-04-2021	I	NMR Spectroscopy: Chemical Shift and Factors affecting Chemical Shift	Youtube Link	PPT	NOTES	Other Resources YouTube link
07-05-2021	I	NMR Spectroscopy: Integration and Spin-spin Coupling	Youtube Link	PPT	NOTES	Other Resources YouTube link

Supplementary Materials for Reference and Self Study: *(add more rows if needed)*

Date	Module	Topic	Live	Powerpoint	Supplement	Remarks, if
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	(as per Lesson Plan)		Recording Link	Presentation Link	any Notes / Resources	any
12-05-2021	I	NMR Spectroscopy: ¹³ C NMR and Applications of NMR	Youtube Link	PPT	NOTES	Other Resources YouTube link
15-05-2021	I	Introduction to Mass Spectrometry	Youtube Link	PPT	NOTES	Other Resources
22-05-2021	I	Principles of Mass Spectrometry	Youtube Link	PPT	NOTES	Other Resources YouTube Link
28-05-2021	I	Mass spectrometry: Instrumentation, Ionization methods, Analyzers, and its Applications	Youtube Link	PPT	NOTES	Other Resources
02-06-2021	IV	Radioimmunoassay (RIA): Importance, various components, Principle	Youtube Link	PPT	NOTES	Other Resources
05-06-2021	IV	Radioimmunoassay (RIA): Procedure, different methods and Applications	Youtube Link	PPT	NOTES	Other Resources

Supplementary Materials for Reference and Self Study: *(add more rows if needed)*

Date	Module (as per	Topic	Live Recording	Powerpoint Presentation	Supplementary	Remarks, if any
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	Lesson Plan)		Link	Link	Notes / Resources	
09-06-2021	II	X- Ray Diffraction Methods: Introduction, Origins of X-rays and Basic aspects of crystals	Youtube Link	PPT	NOTES	Other Resources YouTube link
16-06-2021	II	X- Ray Diffraction Methods: Different methods, application, Structure elucidation	Youtube Link	PPT	NOTES	Other Resources YouTube link
18-06-2021	II	Thermal Methods of Analysis- TGA, DTA & DSC	Youtube Link	PPT	NOTES	Other Link 1 Link 2
07-07-2021	III	Calibration and validation, Calibration of various Instruments	Youtube Link	PPT	NOTES	Other Resources
07-07-2021	IV	Extraction techniques	Youtube Link	PPT	NOTES	Other Resources
07-07-2021	V	Hyphenated techniques-LC-MS/MS, GC-MS/MS	Youtube Link	PPT	NOTES	Other Resources