

(COURSE 1)	WEEK #1					
juas	11 Jan. Monday	12 Jan. Tuesday	13 Jan. Wednesday	14 Jan. Thursday	15 Jan. Friday	
MORNING		Special relativity, electromagnetism, classical & quantum mechanics: What to remember for particle accelerators <i>E. Métral</i>	Transverse Beam Dynamics B. Holzer	Transverse Beam Dynamics B. Holzer	Transverse Beam Dynamics B. Holzer	08:45 - 09:45
			Transverse Beam Dynamics B. Holzer	Transverse Beam Dynamics B. Holzer	Transverse Beam Dynamics B. Holzer	09:45 - 10:45
		How to make the best use of AI and ML A. Oeftiger and R. Ischebeck	Transverse Beam Dynamics B. Holzer	Transverse Beam Dynamics B. Holzer	Transverse Beam Dynamics B. Holzer	10:45 - 12:00
AFTERNOON	12:00 - 13:15					
	(13:00 - 14:45) ECLA	Transverse Beam Dynamics B. Holzer	Longitudinal Beam Dynamics <i>A. Lasheen</i>	Longitudinal Beam Dynamics <i>A. Lasheen</i>	Longitudinal Beam Dynamics <i>A. Lasheen</i>	13:15 - 14:15
	(15:00 - 16:00) OFFICIAL OPENING (1/2): Presentation of ESI and JUAS <i>E. Métral, F. Mouthon, D. Baizhanova</i>	Transverse Beam Dynamics B. Holzer	Longitudinal Beam Dynamics <i>A. Lasheen</i>	Longitudinal Beam Dynamics <i>A. Lasheen</i>	Longitudinal Beam Dynamics <i>A. Lasheen</i>	14:15 - 15:15
	(16:00 - 17:00) OFFICIAL OPENING (2/2): Introduction of students + ice breaking <i>E. Métral, F. Mouthon, D. Baizhanova</i>	Longitudinal Beam Dynamics <i>A. Lasheen</i>	Longitudinal Beam Dynamics <i>A. Lasheen</i>	Longitudinal Beam Dynamics <i>A. Lasheen</i>	Longitudinal Beam Dynamics <i>A. Lasheen</i>	15:15 - 16:30
	Free time for food shopping and refreshments	Particle Accelerators in the 21st century Seminar <i>M. Vretenar</i>	Introduction to CERN & its Accelerator Complex Seminar <i>B. Mikulec</i>	Electron-positron circular colliders Seminar <i>J. Keintzel</i>	Longitudinal Beam Dynamics <i>A. Lasheen</i>	16:30 - 17:30
		International apero				17:30 - 18:30
						18:30 - 20:00

(COURSE 1)	WEEK #2					
juas...	18 Jan. Monday	19 Jan. Tuesday	20 Jan. Wednesday	21 Jan. Thursday	22 Jan. Friday	
MORNING	Transverse Beam Dynamics B. Holzer	Longitudinal Beam Dynamics A. Lasheen	Linacs J.B. Lallement	Linacs J.B. Lallement	Linacs J.B. Lallement	08:45 - 09:45
	GROUP1: TBD B. Holzer GROUP2: Intro to Xsuite for TBD N. Fuster Mar5nez	Longitudinal Beam Dynamics A. Lasheen	Linacs J.B. Lallement	Linacs J.B. Lallement	Linacs J.B. Lallement	09:45 - 10:45
	GROUP2: TBD B. Holzer GROUP1: Intro to Xsuite for TBD N. Fuster Mar5nez	Longitudinal Beam Dynamics A. Lasheen	Linacs J.B. Lallement	Linacs J.B. Lallement	Linacs J.B. Lallement	10:45 - 12:00
AFTERNOON						12:00 - 13:15
	GROUP1: TBD B. Holzer GROUP2: Xsuite TBD workshop N. Fuster Mar5nez	GROUP1: Xsuite longitudinal workshop B. Salvant GROUP2: Longitudinal Beam Dynamics A. Lasheen	Transverse linear imperfections D. Gamba	Transverse linear imperfections D. Gamba	Transverse linear imperfections D. Gamba	13:15 - 14:15
			Transverse linear imperfections D. Gamba	Transverse linear imperfections D. Gamba	Transverse linear imperfections D. Gamba	14:15 - 15:15
	GROUP2: TBD B. Holzer GROUP1: Xsuite TBD workshop N. Fuster Mar5nez	GROUP2: Xsuite longitudinal workshop B. Salvant GROUP1: Longitudinal Beam Dynamics A. Lasheen	Transverse linear imperfections D. Gamba	Transverse linear imperfections D. Gamba	Transverse linear imperfections D. Gamba	15:15 - 16:30
				IBS and Touschek Seminar Fanouria Antoniou		16:30 - 17:30

(COURSE 1)		WEEK #3										
		25 Jan. Monday		26 Jan. Tuesday		27 Jan. Wednesday		28 Jan. Thursday		29 Jan. Friday		
MORNING	WRITTEN (pen-and-paper) EXAMINATION 1/4 (09:00 - 11:00) <u>Transverse beam dynamics</u>		Cyclotrons <i>A. Gerbershagen</i>		Fixed-target beamlines Seminar <i>A. Gerbershagen</i>		Synchrotron Radiation <i>R. Ischebeck</i>		Synchrotron Radiation <i>R. Ischebeck</i>		08:45 - 09:45	
			Cyclotrons <i>A. Gerbershagen</i>		Synchrotron Radiation <i>R. Ischebeck</i>		Synchrotron Radiation <i>R. Ischebeck</i>		Synchrotron Radiation <i>R. Ischebeck</i>		09:45 - 10:45	
			Cyclotrons <i>A. Gerbershagen</i>		Synchrotron Radiation <i>R. Ischebeck</i>		Synchrotron Radiation <i>R. Ischebeck</i>		Synchrotron Radiation <i>R. Ischebeck</i>		10:45 - 12:00	
												12:00 - 13:15
AFTERNOON			Visits at CERN (ALICE experiment with John Jowett, LEIR with Maciej Slupecki and CCC with Panos Zisopoulos; possibly others)		Synchrotron Radiation <i>R. Ischebeck</i>		Synchrotron Radiation <i>R. Ischebeck</i>		Synchrotron Radiation <i>R. Ischebeck</i>		13:15 - 14:15	
	WRITTEN (pen-and-paper) EXAMINATION 2/4 (14:15 - 16:15) <u>Longitudinal beam dynamics</u>				Synchrotron Radiation <i>R. Ischebeck</i>		Transverse nonlinear effects <i>S. Kostoglou</i>		Transverse nonlinear effects <i>S. Kostoglou</i>		14:15 - 15:15	
					Transverse nonlinear effects <i>S. Kostoglou</i>		Transverse nonlinear effects <i>S. Kostoglou</i>		Transverse nonlinear effects <i>S. Kostoglou</i>		15:15 - 16:30	
					Transverse nonlinear effects <i>S. Kostoglou</i>				Low-emittance lattices for large colliders Seminar <i>Pantaleo Raimondi</i>		16:30 - 17:30	
			C1 APERO ALUMNI								17:30 - 18:00	
												18:00 - 19:30

(COURSE 1)		WEEK #4				
juas...						
	1 Feb. Monday	2 Feb. Tuesday	3 Feb. Wednesday	4 Feb. Thursday	5 Feb. Friday	
MORNING	WRITTEN (pen-and-paper) EXAMINATION 3/4 (09:00 - 11:00) <u>Synchrotron Radiation</u>	Collective effects (mainly space charge & instabilities) <i>M. Migliorati and E. Chiadroni</i>	Collective effects (mainly space charge & instabilities) <i>M. Migliorati and E. Chiadroni</i>	Collective effects (mainly space charge & instabilities) <i>M. Migliorati and E. Chiadroni</i>	ORAL EXAMINATION Accelerator design	08:45 - 09:45
		Collective effects (mainly space charge & instabilities) <i>M. Migliorati and E. Chiadroni</i>	Collective effects (mainly space charge & instabilities) <i>M. Migliorati and E. Chiadroni</i>	Accelerator design <u>Workshop</u> <i>A. Oeftiger</i>		09:45 - 10:45
		Collective effects (mainly space charge & instabilities) <i>M. Migliorati and E. Chiadroni</i>	Collective effects (mainly space charge & instabilities) <i>M. Migliorati and E. Chiadroni</i>	Accelerator design <u>Workshop</u> <i>A. Oeftiger</i>		10:45 - 12:00
AFTERNOON	Networking event (during C1 this year as it was during C2 in 2026)					12:00 - 13:15
		Accelerator design <i>B. Härer</i>	Accelerator design <u>Workshop</u> <i>A. Oeftiger</i>	Accelerator design <u>Workshop</u> <i>A. Oeftiger</i>	ORAL EXAMINATION Accelerator design	13:15 - 14:15
		Accelerator design <i>B. Härer</i>	Accelerator design <u>Workshop</u> <i>A. Oeftiger</i>	Accelerator design <u>Workshop</u> <i>A. Oeftiger</i>		14:15 - 15:15
		Accelerator design <i>B. Härer</i>	Accelerator design <u>Workshop</u> <i>A. Oeftiger</i>	Accelerator design <u>Workshop</u> <i>A. Oeftiger</i>	Accelerator design: Summary discussion A. Oeftiger et al.	15:15 - 16:30
		Accelerator design <u>Workshop</u> <i>A. Oeftiger</i>	Accelerator design <u>Workshop</u> <i>A. Oeftiger</i>	Accelerator design <u>Workshop</u> <i>A. Oeftiger</i>	Electron microscopy and diffraction Seminar Simona Borelli	16:30 - 17:30

(COURSE 1)		WEEK #5									
		8 Feb. Monday		9 Feb. Tuesday		10 Feb. Wednesday		11 Feb. Thursday		12 Feb. Friday	
MORNING	Collective effects (mainly space charge & instabilities) <i>M. Migliorati and E. Chiadroni</i>	Collective effects (mainly space charge & instabilities) <i>M. Migliorati and E. Chiadroni</i>			Full-day trip to ESRF (with J.L. Revol)		(09:30 - 10:30) Free-Electron Lasers Seminar <i>E. Prat Costa</i>		08:45 - 09:45		
	Collective effects (mainly space charge & instabilities) <i>M. Migliorati and E. Chiadroni</i>	Collective effects (mainly space charge & instabilities) <i>M. Migliorati and E. Chiadroni</i>					(10:30 - 11:30) Beam cooling Seminar <i>Chris Rogers</i>		09:45 - 10:45		
	Collective effects (mainly space charge & instabilities) <i>M. Migliorati and E. Chiadroni</i>	GROUP1: CST-Xsuite case study <i>D. Amorim and S. Joly</i> GROUP2: Collective effects <i>M. Migliorati</i>					(11:30 - 12:30) CLOSING SESSION Course 1		10:45 - 12:00		
									12:00 - 13:15		
AFTERNOON	Injection / Extraction <i>N. Carmignani</i>	GROUP2: CST-Xsuite case study <i>D. Amorim and S. Joly</i> GROUP1: Collective effects <i>M. Migliorati</i>			Full-day trip to ESRF (with J.L. Revol)		Goodbye Apero/buffet		13:15 - 14:15		
	Injection / Extraction <i>N. Carmignani</i>	Plasma Wakefield Acceleration <i>Massimo Ferrario</i>							14:15 - 15:15		
	Injection / Extraction <i>N. Carmignani</i>	Plasma Wakefield Acceleration <i>Massimo Ferrario</i>	WRITTEN (pen-and-paper) EXAMINATION 4/4 (14:15 - 16:15) <u>All the other lectures</u>				15:15 - 16:30				
		Plasma Wakefield Acceleration <i>Massimo Ferrario</i>					16:30 - 17:30				

(COURSE 2)		WEEK #6				
juas...	15 Feb. Monday	16 Feb. Tuesday	17 Feb. Wednesday	18 Feb. Thursday	19 Feb. Friday	
	MORNING	Some reminders <i>E. Métral</i>	Introduction to RF <i>A. Mostacci</i>	RF Engineering <i>A. Mostacci, C. Vollinger</i>	RF Engineering <i>A. Mostacci, C. Vollinger</i>	08:45 - 09:45
		Introduction to CERN practical days Magnet / SC / RF / Vacuum / CLEAR <i>J. Bauche, J. Fleiter, A. Mostacci, V. Baglin, A. Gilardi</i>	Introduction to RF <i>A. Mostacci</i>	RF Engineering <i>A. Mostacci, C. Vollinger</i>	RF Engineering <i>A. Mostacci, C. Vollinger</i>	09:45 - 10:45
		How to make the best use of AI and ML <i>A. Oeftiger and R. Ischebeck, et al. (stbc)</i>	Introduction to RF <i>A. Mostacci</i>	RF Engineering <i>A. Mostacci, C. Vollinger</i>	RF Engineering <i>A. Mostacci, C. Vollinger</i>	10:45 - 12:00
AFTERNOON						12:00 - 13:15
	(13:00 - 14:45) ECLA	Normal Conducting Magnets <u>INTRODUCTION</u> (Lect. #1) <i>T. Zickler</i>	Introduction to RF <i>A. Mostacci</i>	RF Engineering <i>A. Mostacci, C. Vollinger</i>	Normal Conducting Magnets <u>CASE STUDY #2</u> (by sub-groups #6) <i>J. Bauche, T. Zickler</i>	13:15 - 14:15
	(15:00 - 16:00) OFFICIAL OPENING (1/2): Presentation of ESI and JUAS <i>E. Métral, F. Mouthon, D. Baizhanova</i>	Normal Conducting Magnets <u>BASIC PRINCIPLES</u> (Lect. #2) <i>T. Zickler</i>	Normal Conducting Magnets <u>MAGNET CONSTRUCTION</u> (Lect. #4) <i>T. Zickler</i>	Normal Conducting Magnets <u>CASE STUDY INTRODUCTION</u> (Lect. #7) <i>J. Bauche, T. Zickler</i>	Normal Conducting Magnets <u>CASE STUDY #3</u> (by sub-groups #6) <i>J. Bauche, T. Zickler</i>	14:15 - 15:15
	(16:00 - 17:00) OFFICIAL OPENING (2/2): Introduction of students + ice breaking <i>E. Métral, F. Mouthon, D. Baizhanova</i>	Normal Conducting Magnets <u>MAGNET TYPES</u> (Lect. #3) <i>T. Zickler</i>	Normal Conducting Magnets <u>ANALYTICAL DESIGN</u> (Lect. #5) <i>T. Zickler</i>	Normal Conducting Magnets <u>CASE STUDY #1 (Cont'd)</u> (by sub-groups #6) <i>J. Bauche, T. Zickler</i>	Normal Conducting Magnets <u>CASE STUDY #4</u> (by sub-groups #6) <i>J. Bauche, T. Zickler</i>	15:15 - 16:30
	Free time for food shopping and refreshments	Particle accel., instruments of discovery in physics (Seminar) <i>P. Lebrun</i>	Normal Conducting Magnets <u>NUMERICAL DESIGN</u> (Lect. #6) <i>T. Zickler</i>	Normal Conducting Magnets <u>CASE STUDY #1 (Cont'd)</u> (by sub-groups #6) <i>J. Bauche, T. Zickler</i>	The US Electron-Ion collider (Zoom) Seminar <i>T. Satogata</i>	16:30 - 17:30
		International apero				17:30 - 18:30
						18:30 - 20:00

(COURSE 2)		WEEK #7				
juas...		22 Feb. Monday	23 Feb. Tuesday	24 Feb. Wednesday	25 Feb. Thursday	26 Feb. Friday
MORNING	RF Engineering <i>A. Mostacci, C. Vollinger</i>	RF Engineering <i>A. Mostacci, C. Vollinger</i>	Superconducting RF Cavities <i>S. Calatroni</i>	Superconducting magnets <i>P. Ferracin</i>	Superconducting magnets <i>P. Ferracin</i>	08:45 - 09:45
	RF Engineering <i>A. Mostacci, C. Vollinger</i>	RF Engineering <i>A. Mostacci, C. Vollinger</i>	Superconducting RF Cavities <i>S. Calatroni</i>	Superconducting magnets <i>P. Ferracin</i>	Superconducting magnets <i>P. Ferracin</i>	09:45 - 10:45
	RF Engineering <i>A. Mostacci, C. Vollinger</i>	Cryogenics for Superconducting devices <i>P. Lebrun</i>	Superconducting RF Cavities <i>S. Calatroni</i>	Superconducting magnets <i>P. Ferracin</i>	Superconducting magnets <i>P. Ferracin</i>	10:45 - 12:00
AFTERNOON						12:00 - 13:15
	Normal Conducting Magnets <u>CASE STUDY</u> (Oral presentation by group/students) <i>J. Bauche, T. Zickler</i>	Superconductivity (intro): <i>From solid state physics to technical materials</i> <i>L. Bottura</i>	Vacuum systems <i>V. Baglin</i>	Superconducting magnets <i>P. Ferracin</i>	Superconducting magnets <i>P. Ferracin</i>	13:15 - 14:15
	Normal Conducting Magnets <u>CASE STUDY</u> (Oral presentation by group/students) <i>J. Bauche, T. Zickler</i>	Superconductivity (intro): <i>From solid state physics to technical materials</i> <i>L. Bottura</i>	Vacuum systems <i>V. Baglin</i>	Vacuum systems <i>V. Baglin</i>	Vacuum systems <i>V. Baglin</i>	14:15 - 15:15
	Normal Conducting Magnets <u>TUTORIAL</u> <i>J. Bauche, T. Zickler</i>		Vacuum systems <i>V. Baglin</i>	Vacuum systems <i>V. Baglin</i>	Vacuum systems <i>V. Baglin</i>	15:15 - 16:30
	Normal Conducting Magnets <u>TUTORIAL</u> <i>J. Bauche, T. Zickler</i>		Future high-energy linear colliders Seminar <i>P. Burrows</i>	Vacuum systems <i>V. Baglin</i>	General challenges of superconducting magnets for the next step in HEP Seminar <i>L. Bottura</i>	16:30 - 17:30

(COURSE 2)		WEEK #8															
juas		1 Mar. Monday		2 Mar. Tuesday		3 Mar. Wednesday		4 Mar. Thursday		5 Mar. Friday							
MORNING			WRITTEN (pen-and-paper) EXAMINATION 1/4 (09:00 - 11:00) <u>RF Engineering</u>		Particle Sources <i>T. Thuillier</i>		Particle Sources <i>T. Thuillier</i>		Beam instrumentation <i>P. Forck</i>		Beam instrumentation <i>P. Forck</i>		08:45 - 09:45				
					Particle Sources <i>T. Thuillier</i>		High Power Proton Linacs <i>M. Eshraqi</i>		Beam instrumentation <i>P. Forck</i>		Beam instrumentation P. Forck		09:45 - 10:45				
					Particle Sources <i>T. Thuillier</i>		High Power Proton Linacs <i>M. Eshraqi</i>		Beam instrumentation <i>P. Forck</i>		Beam instrumentation <i>P. Forck</i>		10:45 - 12:00				
														12:00 - 13:15			
AFTERNOON			WRITTEN (pen-and-paper) EXAMINATION 2/4 (14:15 - 16:15) <u>Magnets</u> <u>(Normal & Superconducting)</u> + report for NC from students to be given before (prep. for exam)		Visits at CERN (LINAC4 with Alessandra Lombardi and Jean-Baptiste Lallement; AD and ELENA with Christian Carli, Davide Gamba, Francois Butin; CLEAR with Antonio Gilardi and Wilfrid Farabolini; Thin film coating facilities with Bernard Henrist, Maria Carmen Giordano, Pedro Costa Pinto, Wilhelmus Vollenberg, Yorick Maxence Delaup)		Beam instrumentation <i>P. Forck</i>		Visit & Experimental work at Bergoz Instrumentation E. Touzain		Beam instrumentation <i>P. Forck</i>		13:15 - 14:15				
							Beam instrumentation <i>P. Forck</i>				Beam instrumentation <i>P. Forck</i>		14:15 - 15:15				
							Beam instrumentation <i>P. Forck</i>				Beam instrumentation <i>P. Forck</i>		15:15 - 16:30				
							Energy recovery linacs Seminar <i>M. Arnold</i>						16:30 - 17:30				
													17:30 - 18:00				
														18:00 - 19:30			
														C2 APERO ALUMNI			

(COURSE 2)		WEEK #9										
	8 Mar. Monday		9 Mar. Tuesday		10 Mar. Wednesday		11 Mar. Thursday		12 Mar. Friday			
	MORNING	WRITTEN (pen-and-paper) EXAMINATION 3/4 (09:00 - 11:00) <u>Beam instrumentation</u>	Practical days at CERN RF / SC / VACUUM / MAGNET / CLEAR		Practical days at CERN RF / SC / VACUUM / MAGNET / CLEAR		Low Energy Accelerators <i>W. Mondelaers</i>		Acc. for medical & industrial applications <i>E. Vanderkraaij</i>		08:45 - 09:45	
			Practical days at CERN RF / SC / VACUUM / MAGNET / CLEAR		Practical days at CERN RF / SC / VACUUM / MAGNET / CLEAR		Low Energy Accelerators <i>W. Mondelaers</i>		Acc. for medical & industrial applications <i>E. Vanderkraaij</i>		09:45 - 10:45	
				Practical days at CERN RF / SC / VACUUM / MAGNET / CLEAR		Practical days at CERN RF / SC / VACUUM / MAGNET / CLEAR		Radiation safety <i>X. Queralt</i>		Survey and Alignment of Accelerators <i>Mateusz Sosin</i>		10:45 - 12:00
												12:00 - 13:15
AFTERNOON	Reserved slot: Networking event (in case it could not take place during C1 on 01/02/27)	Practical days at CERN RF / SC / VACUUM / MAGNET / CLEAR		Practical days at CERN RF / SC / VACUUM / MAGNET / CLEAR		Radiation safety <i>X. Queralt</i>		Survey and Alignment of Accelerators <i>Mateusz Sosin</i>		13:15 - 14:15		
		Practical days at CERN RF / SC / VACUUM / MAGNET / CLEAR		Practical days at CERN RF / SC / VACUUM / MAGNET / CLEAR		Radiation safety => Simulations <i>X. Queralt</i>		Energy and sustainability for particle accelerators <i>S. Claudet</i>		14:15 - 15:15		
		Practical days at CERN RF / SC / VACUUM / MAGNET / CLEAR		Practical days at CERN RF / SC / VACUUM / MAGNET / CLEAR		Radiation safety => Simulations <i>X. Queralt</i>		Energy and sustainability for particle accelerators <i>S. Claudet</i>		15:15 - 16:30		

(COURSE 2)		WEEK #10				
	15 Mar. Monday	16 Mar. Tuesday	17 Mar. Wednesday	18 Mar. Thursday	19 Mar. Friday	
MORNING	ORAL EXAMINATION Practical days @CERN	WRITTEN (pen-and-paper) EXAMINATION 4/4 (09:00 - 11:00) <u>All the other lectures</u>	Trip to PSI (for 2 days)	Visit of PSI with R. Ischebeck. Lectures on accelerator controls (Elke Zimoch) and ProScan + Some seminars	(09:30 - 10:30) Accelerator driven system Seminar <i>Ulrich Dorda</i>	08:45 - 09:45
					(10:30 - 11:30) AWAKE Seminar <i>E. Gschwendtner</i>	09:45 - 10:45
					(11:30 - 12:30) CLOSING SESSION Course 2	10:45 - 12:00
AFTERNOON		Visit to Geneva Hospital with 1 seminar (see below)	Visit of PSI with R. Ischebeck. Lectures on accelerator controls (Elke Zimoch) and ProScan + Some seminars	Trip back from PSI	Goodbye Aperero/buffet	12:00 - 13:15
						13:15 - 14:15
		Radiation Oncology: Biology, Physics & Clinical Applications (Seminar) <i>A. Durham</i>				14:15 - 15:15
						15:15 - 16:30
						16:30 - 17:30
						18:30 - 19:30