JUAS - PRELIMINARY (version 3) TIMETABLE 2020 - WEEK 1

Schedule 2020	Monday Jan 13	Tuesday Jan 14	Wednesday Jan 15	Thursday Jan 16	Friday Jan 17
09:00					
		Relativity *H. Henke*	**Electro-magnetism** *H. Henke*	**Intro. to Accelerator Design** *Ph. Bryant*	**Intro. to the Mini-Workshop** *Ph. Bryant*
10:00		**Coffee Break**	**Coffee Break**	**Coffee Break**	**Coffee Break**
10:15		**Relativity** *H. Henke*	**Electro-magnetism** *H. Henke*	**Intro. to Accelerator Design** *Ph. Bryant*	**Intro. to the Mini-Workshop** *Ph. Bryant*
11:15		**Relativity** *H. Henke*	**Electro-magnetism** *H. Henke*	**Intro. to Accelerator Design** *Ph. Bryant*	***Bus leaves at 11:15 from JUAS (Lunch at CERN, R1, offered by ESI)***
12:15	**12:00 OFFICIAL OPENING (welcome & building visit)**	**BREAK**	**BREAK**	**BREAK**	
	13:00 WELCOME LUNCH				**13:30 Visit of LHC Magnets Test Hall** *M. Bajko*
14:00	**14:00 Presentation of JUAS & Introduction of students** *P. Lebrun*	**Relativity** *H. Henke*	**Electro-magnetism** *H. Henke*	**Intro. to Accelerator Design** *Ph. Bryant*	**15:00 Introduction to CERN & its Accelerator Network Seminar -** *R. Alemany*
15:00	**History of particle accelerators** Seminar *V. Vaccaro*	**Particle optics** N. Biancacci	**Particle optics** N. Biancacci	**Intro. to Accelerator Design** *Ph. Bryant*	
16:00		**Coffee Break**	**Coffee Break**	**Coffee Break**	**16:30 Visit of CERN Control Center** *R. Alemany* **Bus leaves at 17:30 from CERN**
16:15	**CHECK-IN AT THE RESIDENCE & SHOPPING FOR GROCERIES**	**Particle optics** N. Biancacci	**Particle optics** N. Biancacci	**Intro. to Accelerator Design** *Ph. Bryant*	
17:15		**Particle optics** N. Biancacci			
18:15		**AFTER WORK AT ESI**			

JUAS - PRELIMINARY (version 3) TIMETABLE 2020 - WEEK 2

Schedule 2020	Monday Jan 20	Tuesday Jan 21	Wednesday Jan 22	Thursday Jan 23	Friday Jan 24
09:00					
	Transverse Dynamics *A. Latina*	**Transverse Dynamics** *A. Latina*	**Transverse Dynamics** *A. Latina*	**Linacs** *D. Alesini*	**Cyclotrons** *B. Jacquot*
10:00	**Coffee Break**	**Coffee Break**	**Coffee Break**	**Coffee Break**	**Coffee Break**
10:15	**Transverse Dynamics** *A. Latina*	**Transverse Dynamics** *A. Latina*	**Transverse Dynamics** *A. Latina*	**Linacs** *D. Alesini*	**Cyclotrons** *B. Jacquot*
11:15	**Transverse Dynamics** *A. Latina*	**Transverse Dynamics** *A. Latina*	**Transverse Dynamics** *A. Latina*	**Linacs** *D. Alesini*	**Cyclotrons** *B. Jacquot*
12:15	**WORKING LUNCH**	**BREAK**	**BREAK**	**BREAK**	**BREAK**
14:00	**Intro. to MAD-X** *G. Sterbini*	**Transverse Dynamics** *A. Latina*	**Linacs** *D. Alesini*	**Cyclotrons** *B. Jacquot*	**Transverse Dynamics** *A. Latina*
15:00	**MADX** *N. Fuster Martinez / H. Garcia Morales / A. Latina / G. Sterbini*	**MADX** *N. Fuster Martinez / H. Garcia Morales / A. Latina / G. Sterbini*	**Linacs** *D. Alesini*	**Cyclotrons** *B. Jacquot*	**Transverse Dynamics** *A. Latina*
16:00	**Coffee Break**	**Coffee Break**	**Coffee Break**	**Coffee Break**	**Coffee Break**
16:15	**MADX** *N. Fuster Martinez / H. Garcia Morales / A. Latina / G. Sterbini*	**MADX** *N. Fuster Martinez / H. Garcia Morales / A. Latina / G. Sterbini*	**Linacs** *D. Alesini*	**Cyclotrons** *B. Jacquot*	**MADX** *N. Fuster Martinez / H. Garcia Morales / A. Latina / G. Sterbini*
17:15			**European Projects for Collaborative Accelerator R&D** *Seminar* *M. Vretenar*		**MADX** *N. Fuster Martinez / H. Garcia Morales / A. Latina / G. Sterbini*
18:15			**AFTER WORK AT ESI**		

JUAS - PRELIMINARY (version 3) TIMETABLE 2020 - WEEK 3

Schedule 2020	Monday Jan 27	Tuesday Jan 28	Wednesday Jan 29	Thursday Jan 30	Friday Jan 31
09:00	*Bus leaves at 07:00 from JUAS* *(2 hours of travel by bus)* **VISIT AT ESRF** *J-L. Revol* ***(Lunch offered by ESRF)***	**Linear imperfections** *H. Bartosik*	**Synchrotron Radiation** *R. Ischebeck*	**Synchrotron Radiation** *R. Ischebeck*	**Synchrotron Radiation** *R. Ischebeck*
10:00		**Coffee Break**	**Coffee Break**	**Coffee Break**	**Coffee Break**
10:15		**Linear imperfections** *H. Bartosik*	**Synchrotron Radiation** *R. Ischebeck*	**Synchrotron Radiation** *R. Ischebeck*	**Synchrotron Radiation** *R. Ischebeck*
11:15		**Linear imperfections** *H. Bartosik*	**Synchrotron Radiation** *R. Ischebeck*	**Synchrotron Radiation** *R. Ischebeck*	**Synchrotron Radiation** *R. Ischebeck*
12:15		**BREAK**	**BREAK**	**BREAK**	**BREAK**
14:00	**14:00 - 16:00** **Injection / Extraction** *T. Perron*	**Synchrotron Radiation** *R. Ischebeck*	**Linear imperfections** *H. Bartosik*	**Non-linear effects** *H. Bartosik*	**Non-linear effects** *H. Bartosik*
15:00		**Synchrotron Radiation** *R. Ischebeck*	**Linear imperfections** *H. Bartosik*	**Non-linear effects** *H. Bartosik*	**Non-linear effects** *H. Bartosik*
16:00		**Coffee Break**	**Coffee Break**	**Coffee Break**	**Coffee Break**
16:15	*Bus leaves at 17:00 from ESRF*	**Synchrotron Radiation** *R. Ischebeck*	**Linear imperfections** *H. Bartosik*	**Non-linear effects** *H. Bartosik*	**Non-linear effects** *H. Bartosik*
17:15		**Free-Electron Lasers** Seminar (incl. ESIPAP students) *E. Prat*		**LHC & Future High-Energy Circular Collider** Seminar (incl. ESIPAP students) *O. Bruning*	
18:15				**AFTER WORK AT ESI**	

JUAS - PRELIMINARY (version 3) TIMETABLE 2020 - WEEK 4

Schedule 2020	Monday Feb 3	Tuesday Feb 4	Wednesday Feb 5	Thursday Feb 6	Friday Feb 7
09:00					
	Longitudinal Dynamics *E. Métral/B. Salvant*	**Longitudinal Dynamics** *E. Métral/B. Salvant*	**Space charge** *M. Migliorati*	**Mini-workshop Accelerator Design** *Ph. Bryant*	**Longitudinal Dynamics** *E. Métral/B. Salvant*
10:00	**Coffee Break**	**Coffee Break**	**Coffee Break**	**Coffee Break**	**Coffee Break**
10:15	**Longitudinal Dynamics** *E. Métral/B. Salvant*	**Longitudinal Dynamics** *E. Métral/B. Salvant*	**Space charge** *M. Migliorati*	**Mini-workshop Accelerator Design** *Ph. Bryant*	**Longitudinal Dynamics** *E. Métral/B. Salvant*
11:15	**Longitudinal Dynamics** *E. Métral/B. Salvant*	**Longitudinal Dynamics** *E. Métral/B. Salvant*	**Space charge** *M. Migliorati*	**Mini-workshop Accelerator Design** *Ph. Bryant*	**Longitudinal Dynamics** *E. Métral/B. Salvant*
12:15	**WORKING LUNCH**	**BREAK**	**BREAK**	**BREAK**	**BREAK**
14:00	**Space charge** *M. Migliorati*	**Space charge** *M. Migliorati*	**Longitudinal Dynamics** *E. Métral/B. Salvant*	**Mini-workshop Accelerator Design** *Ph. Bryant*	**Presentation of Accelerator Design** *Students*
15:00	**Space charge** *M. Migliorati*	**Space charge** *M. Migliorati*	**Longitudinal Dynamics** *E. Métral/B. Salvant*	**Mini-workshop Accelerator Design** *Ph. Bryant*	**Presentation of Accelerator Design** *Students*
16:00	**Coffee Break**	**Coffee Break**	**Coffee Break**	**Coffee Break**	**Coffee Break**
16:15	**Space charge** *M. Migliorati*	**Space charge** *M. Migliorati*	**Longitudinal Dynamics** *E. Métral/B. Salvant*	**Mini-workshop Accelerator Design** *Ph. Bryant*	**Presentation of Accelerator Design** *Students*
17:15			**Novel High Gradient Particle Accelerators** Seminar *R. Assmann*	**Future High-Energy Linear Colliders** Seminar *L. Rinolfi*	
18:15			**AFTER WORK AT ESI**		

JUAS - PRELIMINARY (version 3) TIMETABLE 2020 - WEEK 5

Schedule 2020	Monday Feb 10	Tuesday Feb 11	Wednesday Feb 12	Thursday Feb 13	Friday Feb 14
09:00					
	Free for preparation of examinations	**EXAMINATION** **Synchrotron Radiation** *Written session*	**EXAMINATION** **Transverse beam dynamics** *Written session*	**EXAMINATION** **Longitudinal beam dynamics** *Written session*	
10:30		**Coffee Break**	**Coffee Break**	**Coffee Break**	
11:00		**EXAMINATION** **Subject TBD** *Written session*	**EXAMINATION** **Subject TBD** *Written session*	**DISCUSSION** **SUMMARY OF** **JUAS LECTURES**	
12:30	**WORKING LUNCH**	**BREAK**	**BREAK**	**JUAS CLOSING COURSE 1** **LUNCH OFFERED BY ESI**	
14:00					
15:00	Free for preparation of examinations				
16:00					
16:15					
17:15					

JUAS - PRELIMINARY (version 3) TIMETABLE 2020 - WEEK 6

Schedule 2020	Monday Feb 17	Tuesday Feb 18	Wednesday Feb 19	Thursday Feb 20	Friday Feb 21
09:00					
		Introduction to RF *A. Mostacci*	**Vacuum systems** *V. Baglin / R. Kersevan*	**Vacuum systems** *V. Baglin / R. Kersevan*	**RF Engineering** *F. Caspers / M. Wendt / M. Bozzolan*
10:00		**Coffee Break**	**Coffee Break**	**Coffee Break**	
10:15		**Introduction to RF** *A. Mostacci*	**Vacuum systems** *V. Baglin / R. Kersevan*	**Vacuum systems** *V. Baglin / R. Kersevan*	**RF Engineering** *F. Caspers / M. Wendt / M. Bozzolan*
11:15		**Introduction to RF** *A. Mostacci*	**Vacuum systems** *V. Baglin / R. Kersevan*	**Vacuum systems** *V. Baglin / R. Kersevan*	**Coffee Break**
12:15	**12:00 OFFICIAL OPENING (welcome & building visit)**	**BREAK**	**BREAK**	**BREAK**	***Bus leaves at 11:30 from JUAS***
	13:00 WELCOME LUNCH				***(Lunch at CERN, R2, offered by ESI)***
14:00	**14:00 Presentation of JUAS & Introduction of students** *P. Lebrun*	**RF Engineering** *F. Caspers / M. Wendt / M. Bozzolan*	**Vacuum systems** *V. Baglin / R. Kersevan*	**RF Engineering** *F. Caspers / M. Wendt / M. Bozzolan*	**VISIT AT CERN**
15:00	**Coffee Break**				
15:15	**Introduction to CERN practical days** *Magnet, Superconductivity, RF, Vacuum, CLEAR*	**RF Engineering** *F. Caspers / M. Wendt / M. Bozzolan*	**RF Engineering** *F. Caspers / M. Wendt / M. Bozzolan*	**RF Engineering** *F. Caspers / M. Wendt / M. Bozzolan*	***AD / ELENA*** ***LINAC 4*** ***Vacuum lab***
16:00		**Coffee Break**	**Coffee Break**	**Coffee Break**	
16:15		**RF Engineering** *F. Caspers / M. Wendt / M. Bozzolan*	**RF Engineering** *F. Caspers / M. Wendt / M. Bozzolan*	**RF Engineering** *F. Caspers / M. Wendt / M. Bozzolan*	
17:15	**CHECK-IN AT THE RESIDENCE & SHOPPING FOR GROCERIES**	**Particle accelerators, instruments of discovery in physics -** Seminar (incl. ESIPAP students) - *Ph. Lebrun*	**Accelerator driven system** Seminar (incl. ESIPAP students) *M. Baylac*		***Bus leaves at 17:30 from CERN***
18:15			**AFTER WORK AT ESI**		

JUAS - PRELIMINARY (version 3) TIMETABLE 2020 - WEEK 7

Schedule 2020	Monday Feb 24	Tuesday Feb 25	Wednesday Feb 26	Thursday Feb 27	Friday Feb 28
09:00				***Bus leaves at 8:00 from JUAS***	
	Beam instrumentation *P. Forck*	**Beam instrumentation** *P. Forck*	**Beam instrumentation** *P. Forck*	***(4 hours of travel by bus)***	
10:00	**Coffee Break**	**Coffee Break**	**Coffee Break**		
10:15					
10:30	**Beam instrumentation** *P. Forck*	**Beam instrumentation** *P. Forck*	**Beam instrumentation** *P. Forck*	**VISIT AT PSI**	**VISIT AT PSI**
11:15	**Beam instrumentation** *P. Forck*	**Beam instrumentation** *P. Forck*	**Beam instrumentation** *P. Forck*	***(Lunch, dinner and coffee breaks offered by PSI, night at PSI offered by ESI)***	***(Lunch and coffee breaks offered by PSI)***
12:15	**WORKING LUNCH**	**BREAK**	**BREAK**		
14:00	**Beam instrumentation** *P. Forck*	**Beam instrumentation** *P. Forck*	**Beam instrumentation** *P. Forck*	**Accelerator Controls** *E. Zimoch*	
15:00	**Superconducting RF Cavities** *F. Caspers*	**Superconducting RF Cavities** *F. Caspers*	**Superconducting RF Cavities** *F. Caspers*		
16:00	**Coffee Break**	**Coffee Break**	**Coffee Break**		
16:15	**Superconducting RF Cavities** *F. Caspers*	**Superconducting RF Cavities** *F. Caspers*	**Superconducting RF Cavities** *F. Caspers*	**Accel. for hadron therapy** Seminar *M. Schippers*	***Bus leaves at 14:30 from PSI***
17:15			**Building Large Accelerators** Seminar *Ph. Lebrun*	**Novel Accelerators on a chip** Seminar *B. Hermann*	***(4 hours of travel by bus)***
18:15			**AFTER WORK AT ESI**		

JUAS - PRELIMINARY (version 3) TIMETABLE 2020 - WEEK 8

Schedule 2020	Monday Mar 2	Tuesday Mar 3	Wednesday Mar 4	Thursday Mar 5	Friday Mar 6
09:00				***Bus leaves at 8:00 from JUAS***	***Bus leaves at 8:00 from JUAS***
	9:00 - 10:30 **Introduction to Magnets** *G. De Rijk*	**Superconducting magnets** *P. Ferracin*	**Mini-workshop** **Normal conducting Magnets** *J. Bauche & T. Zickler*	***(Lunch at CERN, offered by ESI)***	***(Lunch at CERN, offered by ESI)***
10:00 10:15	**Coffee Break**	**Coffee Break**	**Coffee Break**	**PRACTICAL DAYS AT CERN**	**PRACTICAL DAYS AT CERN**
	10:45 - 12:15 **Normal Conducting magnets** *T. Zickler*	**Superconducting magnets** *P. Ferracin*	**Mini-workshop** **Normal conducting Magnets** *J. Bauche & T. Zickler*	RF coordinators: *F. Caspers* *M. Wendt* *M. Bozzolan*	RF coordinators: *F. Caspers* *M. Wendt* *M. Bozzolan*
11:15		**Superconducting magnets** *P. Ferracin*	**Mini-workshop** **Normal conducting Magnets** *J. Bauche & T. Zickler*	VACUUM coordinators: *V. Baglin* *R. Kersevan*	VACUUM coordinators: *V. Baglin* *R. Kersevan*
12:15	**WORKING LUNCH**	**BREAK**	**BREAK**	MAGNET coordinators: *J. Bauche* *L. Fiscarelli*	MAGNET coordinators: *J. Bauche* *L. Fiscarelli*
14:00	**Normal Conducting magnets** *T. Zickler*	**Cryogenics for Superconducting Devices** *Ph. Lebrun*	**Mini-workshop** **Superconducting Magnets** *P. Ferracin & D. Schoerling*	SUPERCONDUCTIVITY coordinator: *J. Fleiter*	SUPERCONDUCTIVITY coordinator: *J. Fleiter*
15:00	**Normal Conducting magnets** *T. Zickler*	**Normal Conducting magnets** *T. Zickler*	**Mini-workshop** **Superconducting Magnets** *P. Ferracin & D. Schoerling*	CLEAR coordinators: *R. Corsini* *W. Farabolini*	CLEAR coordinators: *R. Corsini* *W. Farabolini*
16:00 16:15	**Coffee Break**	**Coffee Break**	**Coffee Break**		
	Superconducting magnets *P. Ferracin*	**Normal Conducting magnets** *T. Zickler*	**Mini-workshop** **Superconducting Magnets** *P. Ferracin & D. Schoerling*		
17:15	**Superconducting magnets** *P. Ferracin*	**Normal Conducting magnets** *T. Zickler*	**AFTER WORK AT ESI**	***Bus leaves at 17:30 from CERN***	***Bus leaves at 17:30 from CERN***
18:15					

JUAS - PRELIMINARY (version 3) TIMETABLE 2020 - WEEK 9

Schedule 2020	Monday March 9	Tuesday March 10	Wednesday March 11	Thursday March 12	Friday March 13
09:00					
	Particle Sources *T. Thuillier*	**Low Energy Electron Accelerators** *W. Mondelaers*	**Survey and Alignment of Accelerators** *H. Mainaud-Durand*	**Life-cycle and reliability of particle accelerators** *S. Meyroneinc*	**High Power Proton Linacs** *S. Bousson*
10:00 10:15	**Coffee Break**	**Coffee Break**	**Coffee Break**	**Coffee Break**	**Coffee Break**
	Particle Sources *T. Thuillier*	**Low Energy Electron Accelerators** *W. Mondelaers*	**Survey and Alignment of Accelerators** *H. Mainaud-Durand*	**Life-cycle and reliability of particle accelerators** *S. Meyroneinc*	**High Power Proton Linacs** *S. Bousson*
11:15					
	Particle Sources *T. Thuillier*	**Low Energy Electron Accelerators** *W. Mondelaers*	**Survey and Alignment of Accelerators** *H. Mainaud-Durand*	**Life-cycle and reliability of particle accelerators** *S. Meyroneinc*	**High Power Proton Linacs** *S. Bousson*
12:15					
	WORKING LUNCH	**BREAK**	**SANDWICH SNACK OFFERED BY ESI**	**SANDWICH SNACK OFFERED BY ESI**	**BREAK**
14:00					
	Particle Sources *T. Thuillier*	**Acc. for medical & industrial applications** *W. Kleeven*	***Bus leaves at 13:00 from JUAS*** **VISIT & EXPERIMENTAL WORK AT BERGOZ INSTRUMENTATION** *E. Touzain* ***Bus leaves at 17:30 from BERGOZ***	***Bus leaves at 13:15 from JUAS***	**Radiation safety** *X. Queralt*
15:00				**Radiation Oncology : Biology, Physics & Clinical Applications** Seminar *P. Tsoutsou*	
	Particle Sources *T. Thuillier*	**Acc. for medical & industrial applications** *W. Kleeven*			**Radiation safety** *X. Queralt*
16:00 16:15	**Coffee Break**	**Coffee Break**			**Coffee Break**
	Energy recovery linacs Seminar *M. Arnold*	**Acc. for medical & industrial applications** *W. Kleeven*		**Therapeutic Applications at Geneva Hospital** ***Bus leaves at 17:30 from HUG***	**Radiation safety** *X. Queralt*
17:15					
					AFTER WORK AT ESI

JUAS - PRELIMINARY (version 3) TIMETABLE 2020 - WEEK 10

Schedule 2020	Monday March 16	Tuesday March 17	Wednesday March 18	Thursday March 19	Friday March 20
09:00					
	Presentation of reports on practical work	**EXAMINATION** **Beam Instrumentation** *Written session*	**EXAMINATION** **RF** *Written session*	**EXAMINATION** **Magnets** *Written session*	
10:30	**Coffee Break**	**Coffee Break**	**Coffee Break**	**Coffee Break**	
11:00	Presentation of reports on practical work	**EXAMINATION** **Subject TBD** *Written session*	**EXAMINATION** **Subject TBD** *Written session*	**DISCUSSION** **SUMMARY OF** **JUAS LECTURES**	
12:30	**WORKING LUNCH**	**BREAK**	**BREAK**	**JUAS CLOSING COURSE 2** **LUNCH OFFERED BY ESI**	
14:00					
15:00	**Free for preparation of examinations**				
16:00					
16:15					
17:15					