

		Mon.	Tue.	Wed.	Thu.	Fri.	Intensive courses and other courses (Dates to be determined)	
First Half, First Semester 2022	1	ESD	Advanced Course in Hydrological Cycle[J/E] SATO C204-2	Introduction to Global Environmental Management[E] OKINO & others D102	Advanced Course in Hydrological Cycle[J/E] SATO C204-2			[Inter-Graduate School Classes] Introduction to Environmental Science [J] (April 5-7): YAMANAKA & others(D201) Introduction to Environmental Science[E] (April 5-7): WATANABE & others (D101)
		ESS			Advanced Course in Chemical Oceanography[J] NISHIOKA WATANABE YAMASHITA C202	☆Advanced Course in Biogeochemical Cycles in Ecosystems[J] (Advanced Course in Biogeoscience [J]) CHIKARAISHI TAKIZAWA D102	Advanced Course in Chemical Oceanography[J] NISHIOKA WATANABE YAMASHITA C202	
		BS	Advanced Course in Environmental Molecular Biology II [J/E] TANAKA ITO TAKABAYASHI WASHIO HORI MIWA D101,ILTS		Fundamental Course in Molecular Biology[J] Fundamental Course in Molecular Biology[E] MORIKAWA & others MORIKAWA & others D101 D102		Advanced Course in Agro-Ecosystem Science I (Crop Production) [J/E] HOSHINO HIRATA NAKAMURA FSC 106	
		EMS	Fundamental Course in Materials Science II [J/E] KAMIYA D103	Advanced Course in Environmental Catalytic Chemistry II [E] KOWALSKA D103	Fundamental Course in Materials Science II [J/E] KAMIYA D103	Advanced Course in Environmental Catalytic Chemistry I[J/E] OHTANI D103	Fundamental Course in Materials Science III[J/E] YAMADA D103	
	2	ESD		Introduction to Environmental Adaptation [J] NORO & others C204-1	Advanced Course in Environmental Geoinformatics[E] Avtar C204-1	Advanced Course in Environmental Geoinformatics[E] Avtar C204-1	Introduction to Environmental Adaptation [J] NORO & others C204-1	Special lecture in Earth System Science II (Intensive courses for Course in Cryosphere Science :Dates TBD [J] Special lecture in Earth System Science IV(Intensive courses for Course in Biogeochemistry :Dates TBD [J]
		ESS	Fundamental Course in Atmosphere-Ocean Physics [J] OSHIMA FUJIWARA D201 Fundamental Course in Atmosphere-Ocean Physics [E] MIZUTA YASUNARI C202	Advanced Course in Geophysical Fluid Dynamics[J] KUBOKAWA D102	Fundamental Course in Atmosphere-Ocean Physics[J] OSHIMA FUJIWARA D201 Fundamental Course in Atmosphere-Ocean Physics[E] MIZUTA YASUNARI C202	☆Advanced Course in Biogeochemical Cycles in Ecosystems[J] (Advanced Course in Biogeoscience [J]) CHIKARAISHI TAKIZAWA D102	Advanced Course in Atmospheric and Oceanographic Data Analysis[J/E] FUKAMACHI AOKI D102	Advanced Course in Forest Sphere Science I [J](Ecosystem Function) :TAKAGI and others (URYU·NAKAGAWA·TESHIO) Advanced Course in Forest Sphere Science II [J]:NAKAMURA and others(WAKAYAMA) Dates TBD Advanced Course in Forest Sphere Science III [J]:JUTSUI and others(TOMAKOMAI) Dates TBD (May)
		BS	Advanced Course in Animal Ecology I [J/E] NODA KOIZUMI D101	Fundamental Course in Marine Biological Processes [J/E] KUDO YOSHIMURA TAKAGI D101	Advanced Course in Animal Ecology I [J/E] NODA KOIZUMI D101	Fundamental Course in Marine Biological Processes [J/E] KUDO YOSHIMURA TAKAGI D101		
		EMS	Fundamental Course in Materials Science III [J/E] YAMADA D103		Fundamental Course in Materials Science I [J/E] OTOMO D103	Advanced Course in Molecular Environmental Science I [J/E] OHTANI D103	Fundamental Course in Materials Science I [J/E] OTOMO D103	Special Lecture in Environmental Materials Science I [J] : II [J] - III [J/E] - IV [J] (Dates TBD)
	3	ESD			Advanced Course in Geoeological Resources [E] HAYAKAWA C204-2	Advanced Course in Academic English Writing for Environmental Sciences [E] Ranner D101		
		ESS	Fundamental Course in Paleoenvironmental Science [J] YAMAMOTO · SEKI · IRINO · MATOBA · IIZUKA D103	Fundamental Course in Marine and Atmospheric Chemistry [J] SUZUKI KAMEYAMA MIYAZAKI D103	Fundamental Course in Marine and Atmospheric Chemistry [J] SUZUKI KAMEYAMA MIYAZAKI D103	Advanced Course in Polar Oceanography [J] AOKI TOYODA NAKAYAMA D103	Fundamental Course in Paleoenvironmental Science [J] YAMAMOTO · SEKI · IRINO · MATOBA · IIZUKA D103	
		BS		Advanced Course in Plant Ecology I [J] ONO LT2F		Advanced Course in Environmental Molecular Biology I [J/E] FUKUI MORIKAWA YAMAGUCHI OCHIAI KASAHARA D102		
	4	ESD	Introduction to Global Environmental Management [E] OKINO & others D102					
		ESS		Fundamental Course in Cold Region Sciences [J/E] T WATANABE & others D101	Advanced Course in Environmental Meteorology [J] T WATANABE KAWASHIMA D102	Fundamental Course in Cold Region Sciences [J/E] T WATANABE & others D101		
	5	ESD	Introduction to Practical Science for Environment I [J] YAMANAKA & others D103	Introduction to Practical Science for Environment II [J] YAMANAKA D103				

[Important] From 1 April 2020, 8 new subjects has been added (marked ☆). Student enrolling before 2019(Academic year), register subject [Former subject name].(The former subjects written in [J]). Please note : Students enrolling before 2019, cant not register unless former subject is written with ☆.

Time	[1st] 8:45-10:15 [2nd] 10:30-12:00 [3rd] 13:00-14:30 [4th] 14:45-16:15 [5th] 16:30-18:00
Venue	[A, B, C, D]Faculty of Environmental Earth Science Bldg. A, B, C, D [LT2F]Institution of Low Temperature Science 2F(215) [LT3F]Institution of Low Temperature Science 3F(N311) [FSC]Field Science Center of Northern Biosphere Bldg. [RB]FSC Research Bldg. 2F [TM] Tomakomai FSC [H]School of Fisheries Sciences [NF]FSC North Administration Section [U]FSC Uryu (Moshiri) [T]FSC Teshio [N]FSC Nakagawa [M]Muroan Marine Station [INFO]Information Incentive Center
Language	[E]Conducted in English [J/E]Whether it is conducted in English or Japanese will be decided after finishing students registration [J]Conducted in Japanese [<i>italics in blue</i>]Classes for English program, open for all students

First Half,
First Semester 2022

		Mon.	Tue.	Wed.	Thu.	Fri.	Intensive courses and other courses (Dates to be determined)					
Second Half, First Semester 2022	1	ESD						Special Lecture in Environmental Science Development I [J]; Dates (August 29-31); YAMAGATA (D103) Special Lecture in Environmental Science Development II [E]; Dates (August 8-10) A SATO and YAMASHITA (D101)				
		ESS		Advanced Course in Remote Sensing Applications [J]	EBUCHI & others D102		Advanced Course in Hydrologic Cycle in Cryosphere [J]	SHIRAIWA SONE MATSUZAWA LT3F				
		BS	Advanced Course in Environmental Molecular Biology II [J/E]	TANAKA ITO TAKABAYASHI WASHIO HORI MIWA D101, LT3		Fundamental Course in Molecular Biology [J] Fundamental Course in Molecular Biology [E]	MORIKAWA & others MORIKAWA & others D101 D102	Advanced Course in Agro-Ecosystem Science I (Crop Production) [J/E]	HOSHINO HIRATA NAKAMURA FSC 106	Special Lecture in Biosphere Science I [J]: TBD(August and February) Fundamental Course in Biomass Production [J]: YAMAHA and others (August-September) Special Lecture in Biosphere Science II [J]: TBD(August)		
		EMS	Advanced Course in Biomaterials Chemistry I [J/E]	YAMADA D103	Advanced Course in Environmental Catalytic Chemistry II [E]	KOWALSKA D103	Advanced Course in Molecular Photonics and Electronics Science II [J/E]	NAKAMURA D103	Advanced Course in Environmental Catalytic Chemistry I [J/E]	OHTANI D103	Advanced Course in Environmental Nano-Materials Chemistry II [J/E]	KONISHI D103
	2	ESD		Advanced Course in Environmental Metrology [J]	TOYODA & others C204-1				Advanced Course in Environmental Metrology [J]	TOYODA & others C204-1		
		ESS	Advanced Course in Ocean Dynamics [J]	MITSUDERA D101	Advanced Course in Geophysical Fluid Dynamics [J]	KUBOKAWA D102	Advanced Course in Atmospheric Dynamics [J]	HORINOUCHE D101	Advanced Course in Hydrologic Cycle in Cryosphere [J]	SHIRAIWA SONE MATSUZAWA LT3F	Advanced Course in Atmospheric and Oceanographic Data Analysis [J/E]	FUKAMACHI AOKI D102
		BS										
		EMS	Advanced Course in Biomaterials Chemistry I [J/E]	YAMADA D103			Advanced Course in Molecular Photonics and Electronics Science II [J/E]	NAKAMURA D103	Advanced Course in Molecular Environmental Science I [J/E]	OHTANI D103	Advanced Course in Environmental Nano-Materials Chemistry II [J/E]	KONISHI D103
	3	ESD	Advanced Course in Environmental Pollution Comparison [E]	TOYODA & others D101			Advanced Course in Geoeological Resources [E]	HAYAKAWA C204-2	Advanced Course in Academic English Writing for Environmental Sciences [E]	Renner D101		
		ESS					Advanced Course in Remote Sensing Applications [J]	EBUCHI & others D103	Advanced Course in Polar Oceanography [J]	AOKI TOYODA NAKAYAMA D103		
		BS	Advanced Course in Biodiversity Science I [J/E]	AIBA KUBO NAGASATO A809	Advanced Course in Plant Ecology I [J]	ONO LT2F			Advanced Course in Environmental Molecular Biology I [J/E]	FUKUI MORIKAWA YAMAGUCHI OCHIAI KASAHARA D102		
		EMS										
	4	ESD	Advanced Course in Environmental Pollution Comparison [E]	TOYODA & others D101								
		ESS					Advanced Course in Environmental Meteorology [J]	T WATANABE KAWASHIMA D102				
		BS	Advanced Course in Biodiversity Science I [J/E]	AIBA KUBO NAGASATO A809								
	5	ESD	Introduction to Practical Science for Environment I [J]	YAMANAKA & others D103	Introduction to Practical Science for Environment II [J]	YAMANAKA D103						
		ESS										
		BS										
		EMS										

Important	From 1 April 2020, 8 new subjects has been added (marked ☆). Student enrolling before 2019(Academic year), register subject [Former subject name].(The former subjects written in [J]). Please note : Students enrolling before 2019, cant not register unless former subject is written with ☆.
Time	[1st] 8:45-10:15 [2nd] 10:30-12:00 [3rd] 13:00-14:30 [4th] 14:45-16:15 [5th] 16:30-18:00 Please note : Students enrolling before 2018, cant not register unless former subject is written with ☆
Venue	[A, B, C, D]Faculty of Environmental Earth Science Bldg. A, B, C, D [LT2F]Institution of Low Temperature Science 2F(215) [LT3F]Institution of Low Temperature Science 3F(N311) [FSC]Field Science Center of Northern Biosphere Bldg. [RB]FSC Research Bldg. 2F [TM] Tomakomai FSC [H]School of Fisheries Sciences [NF]FSC North Administration Section [U]FSC Uryu (Moshiri) [T]FSC Teshio [N]FSC Nakagawa [M]Muroran Marine Station [INFO]Information Incentive Center
Language	[E]Conducted in English [J/E]Whether it is conducted in English or Japanese will be decided after finishing students registration [J]Conducted in Japanese [<i>italics in blue</i>]Classes for English program, open for all students

Second Half,
First Semester 2022

		Mon.	Tue.	Wed.	Thu.	Fri.	Intensive courses and other courses (Dates to be determined)	
First Half, Second Semester 2022	1	ESD	Fundamental Course in Environmental Science Research[E] OKINO D102			Fundamental Course in Environmental Science Research[E] OKINO D102	Fundamental Course in Environmental Science [E] HIRATA (October 3,4,5)(D201)	
		ESS		Advanced Course in Ocean Biogeochemistry[E] NISHIOKA WATANABE YAMASHITA C202	*Fundamental Course in Biogeochemistry [E] [Advanced Course in Tropospheric Chemistry] SUZUKI KAMEYAMA MIYAZAKI C202	*Fundamental Course in Biogeochemistry [E] [Advanced Course in Tropospheric Chemistry] SUZUKI KAMEYAMA MIYAZAKI C202	Advanced Course in Ocean Biogeochemistry[E] NISHIOKA WATANABE YAMASHITA C202	*Introduction to Circumpolar North[Advanced Course in Terrestrial Geochemical Cycle][E] : FUKAMACHI and Others (Dates : TBD)
		EMS		Fundamental Course in Materials Science III[E] KONISI D103	Fundamental Course in Materials Science II [E] KOWALSKA D103		Fundamental Course in Materials Science I [E] KATO D103	Advanced Course in Forest Sphere Science IV (Regional Resources Management)[J/E]: T YOSHIDA & others (October)
	2	ESD		Introduction to Natural Environmental Studies [J/E] TSUYUZAKI NEGISHI SATO D102			Introduction to Natural Environmental Studies [J/E] TSUYUZAKI NEGISHI SATO D102	
		ESS	Advanced Course in Ocean Dynamics [J] MITSUDERA D102	Advanced Course in Climate Dynamics [J] TANIMOTO C202	Advanced Course in Atmospheric Dynamics [J] HORINOUCHE D201 (10/5, 10/26 D102)			
		BS	Advanced Course in Animal Ecology II [J/E] NODA AGETSUMA KOIZUMI KISHIDA OHDACHI D101	Advanced Course in Marine Biosphere Science I (Marine Environmental Biogeochemistry) [J/E] KUDO YOSHIMURA TAKAGI D101	Advanced Course in Animal Ecology II [J/E] NODA AGETSUMA KOIZUMI KISHIDA OHDACHI D101	Advanced Course in Marine Biosphere Science I (Marine Environmental Biogeochemistry) [J/E] KUDO YOSHIMURA TAKAGI D101	Advanced Course in Biodiversity Science II [J/E] UTSUMI NAKAOKA C204-2	Advanced Course in Agro-Ecosystem Science II (Livestock Production) [J/E] KAWAI MITANI FSC 106
		EMS	Advanced Course in Environmental Nano-Materials Chemistry I [J/E] KAMIYA D103	Advanced Course in Biomaterials Chemistry II [J/E] UMEZAWA D103	Advanced Course in Molecular Photonics and Electronics Science I [E] BLJU D103	Advanced Course in Molecular Environmental Science III [J/E] TBD D103	Advanced Course in Environmental Nano-Materials Chemistry III [J/E] YAGI D103	
		ESD	Advanced Course in Climate Change Impacts [E] SATO & others C202	Advanced Course in Environmental Conservation [J/E] TSUYUZAKI C204-2	Advanced Course in Watershed Environmental Science [J/E] NEGISHI & others D102	Advanced Course in Watershed Environmental Science [J/E] NEGISHI & others D102	Advanced Course in Environmental Conservation [J/E] TSUYUZAKI C204-2	
	3	ESS		*Advanced Course in Ecosystems and Environments [E] [Advanced Course in Environmental Analytical Chemistry] CHIKARAISHI TAKIZAWA D103	Advanced Course in Meteorology and Climate in Cold Regions [J] T WATANABE LT2F	Advanced Course in Climate Modeling [J] NAKAMURA KAWASHIMA D103	*Advanced Course in Paleoclimatology[Advanced Course in Paleoenvironmental and Biomarker Geochemistry] [E] YAMAMOTO SEKI IRINO D103	
		BS	Advanced Course in Plant Ecology II [J/E] G KUDO A809			Advanced Course in Biodiversity Science II [J/E] UTSUMI NAKAOKA C204-2		
		ESD	Advanced Course in Climate Change Impacts [E] SATO & others C202	Advanced Course of International Science Communication Methods [E] TOYODA Greve Avtar D101		Advanced Course in Applied Ecology [J/E] SENZAKI A809	Advanced Course in Applied Ecology [J/E] SENZAKI A809	
	4	ESS	Advanced Course in Glacier/Ice Sheet Science [J/E] SUGIYAMA SONE MATOBA IIZUKA LT2F	*Advanced Course in Ecosystems and Environments [E] [Advanced Course in Environmental Analytical Chemistry] CHIKARAISHI TAKIZAWA D103	Advanced Course in Meteorology and Climate in Cold Regions [J] T WATANABE LT2F	Advanced Course in Theoretical Glaciology [E] Greve LT313	*Advanced Course in Paleoclimatology[Advanced Course in Paleoenvironmental and Biomarker Geochemistry] [E] YAMAMOTO SEKI IRINO D103	
		BS	Advanced Course in Plant Ecology II [J/E] G KUDO A809		*Fundamental Course in Biodiversity of Northern Ecosystems [E] G KUDO & others D101	*Fundamental Course in Biodiversity of Northern Ecosystems [E] G KUDO & others D101		
	5	ESD		Advanced Course in Practical Science for Environment [J] YAMANAKA D103				
		BS	Fundamental Course in Biological Diversity [J] KOIZUMI & others D101	Advanced Course in Ecological Genetics I [J/E] OHARA KOSHIKAWA C202	Fundamental Course in Biological Diversity [J] KOIZUMI & others D101	Advanced Course in Ecological Genetics I [J/E] OHARA KOSHIKAWA C202	Fundamental Course in Field Sciences [J/E] YOTSUKURA & others D102	

[Important] From 1 April 2020, 8 new subjects has been added (marked ☆). Student enrolling before 2019(Academic year), register subject [Former subject name].(The former subjects written in []). Please note : Students enrolling before 2019, cant not register unless former subject is written with ☆.
Time [1st] 8:45-10:15 [2nd] 10:30-12:00 [3rd] 13:00-14:30 [4th] 14:45-16:15 [5th] 16:30-18:00 Please note : Students enrolling before 2018, cant not register unless former subject is written with ★
Venue [A, B, C, D]Faculty of Environmental Earth Science Bldg. A, B, C, D [LT2F]Institution of Low Temperature Science 2F(215) [LT3F]Institution of Low Temperature Science 3F(N311) [FSC]Field Science Center of Northern Biosphere Bldg. [RB]FSC Research Bldg. 2F [TM] Tomakomai FSC [H]School of Fisheries Sciences [NF]FSC North Administration Section [U]FSC Uryu (Moshiri) [T]FSC Teschio [N]FSC Nakagawa [M]Muroan Marine Station
[INFO]Information Incentive Center
Language [E]Conducted in English [J/E]Whether it is conducted in English or Japanese will be decided after finishing students registration [J]Conducted in Japanese [*italic in blue*]Classes for English program, open for all students

First Half,
Second Semester 2022

		Mon.	Tue.	Wed.	Thu.	Fri.	Intensive courses and other courses (Dates to be determined)			
Second Semester 2022	1	ESD					Special lecture in Environmental Science Development III[E] (June 4-7):KAWAKAMI (D201)			
		ESS								
		BS						Advanced Course in Aquatic Biology [J]:NAKAOKA & others (Dates :TBD) Advanced Course in Aquatic Biology [E]:NAKAOKA & others (Dates :TBD) Advanced Course in Aquatic Biology II[J]: YAMAHA and others (December)		
	EMS		Fundamental Course in Materials Science III[E]	KONISI D103	Fundamental Course in Materials Science II [E]	KOWALSKA D103	Fundamental Course in Materials Science I [E]	KATO D103		
	ESD	Advanced Course in Environmental Adaption [E]	NORO & others D102		Advanced Course in Environmental Adaption [E]	NORO & others D102		Special Lecture in Biosphere Science I [J] : (August and February)		
	ESS		Advanced Course in Climate Dynamics [J]	TANIMOTO C202						
	BS		Advanced Course in Marine Biosphere Science II [J]	URA HAKODATE		Advanced Course in Marine Biosphere Science II [J]	URA HAKODATE	Advanced Course in Agro-Ecosystem Science II (Livestock Production) [J/E]	KAWAI HOSHINO FSC 106	
	EMS	Advanced Course in Environmental Nano-Materials Chemistry I [J/E]	KAMIYA D103	Advanced Course in Biomaterials Chemistry II [J/E]	UMEZAWA D103	Advanced Course in Molecular Photonics and Electronics Science I [E]	BLJU D103	Advanced Course in Environmental Nano-Materials Chemistry III [J/E]	YAGI D103	
	ESD		Advanced Course in Frozen Ground Environments [J]	ISHIKAWA D102				Advanced Course in Frozen Ground Environments [J]	ISHIKAWA D102	
	ESS					Advanced Course in Climate Modeling [J]	NAKAMURA KAWASHIMA D103			
	BS									
	EMS									
	ESD		Advanced Course of International Science Communication Methods [E]	TOYODA Greve Avtar D101				Advanced Course in Water Resources [E]	WATANABE D101	
	ESS	Advanced Course in Glacier/Ice Sheet Science [J/E]	SUGIYAMA SONE MATOBA IIZUKA LT2F			Advanced Course in Theoretical Glaciology [E]	Greve LT313			
	BS									
EMS										
ESD			Advanced Course in Practical Science for Environment [J]	YAMANAKA D103			Advanced Course in Water Resources [E]	WATANABE D101		
ESS										
BS	Fundamental Course in Ecology [J/E]	KOSHIKAWA & others D102	Advanced Course in Ecological Genetics II [J]	SUZUKI & others C202	Fundamental Course in Ecology [J/E]	KOSHIKAWA & others D102	Advanced Course in Ecological Genetics II [J]	SUZUKI & others C202	Fundamental Course in Field Sciences [J/E]	YOTSUKURA & others D102
EMS										

Important	[1st] 8:45-10:15 [2nd] 10:30-12:00 [3rd] 13:00-14:30 [4th] 14:45-16:15 [5th] 16:30-18:00
Time	[A, B, C, D]Faculty of Environmental Earth Science Bldg. A, B, C, D [LT2F]Institution of Low Temperature Science 2F(215) [LT3F]Institution of Low Temperature Science 3F(N311) [FSC]Field Science Center of Northern Biosphere Bldg.
Venue	[RB]FSC Research Bldg. 2F [TM] Tomakomai FSC [H]School of Fisheries Sciences [NF]FSC North Administration Section [U]FSC Uryu (Moshiri) [T]FSC Teshio [N]FSC Nakagawa [M]Muroran Marine Station [INFO]Information Incentive Center
Language	[E]Conducted in English [J/E]Whether it is conducted in English or Japanese will be decided after finishing students registration [J]Conducted in Japanese <i>italics in blue</i> Classes for English program, open for all students

Second Half,
Second Semester 2022