Lect	ture No	031940	Lecture No 031940						
Subject title Introduction to Biostatistics		Subject I	GPb3319-	-L					
Inst	ructors	髙橋 扌	彩彦,安齋達)	ぎ[TAKAHASHI Kunihiko, ANZAI Tats	uhiko]				
Ser	nester	Sp	ring 2025	Level 1st y	ear <b>Units</b>	2			
Cours	se by the								
instru	ctor with								
practical	experience	ces							
Instructo	r(s):								
Kunihiko Takahashi, Professor, Department of Biostatistics									
Tatsuhiko	o Anzai, A	ssociate Prof	essor, Departm	ent of Biostatistics					
Availabilit	ty in Engli	sh: All classes	are taught in E	nglish.					
Key word	l: Biostati	stics							
Lecture p	place								
Refer to t	the cours	e schedule							
Course F	Purpose a	nd Outline							
Course F	ourpose:								
This cour	rse introd	uces the basic	c techniques imp	portant for analyzing data from epidem	iologic, biomedical and other	public health related rese	earch.		
Statistica	al reasonii	ng will be emp	hasized through	problem solving and practical applica	tions.				
Outline:									
Biostatist	tics is the	application o	f statistical met	hods to data in biological, biomedical a	and health sciences. It is a ke	ey technique for the colle	ction,		
analysis,	analysis, and presentation of data especially in quantitative studies. This course gives lectures on fundamental biostatistical methods through								
their appl	heir applications to data in medical research field including clinical and epidemiological studies.								
Course C	Objective(	s)							
By the er	By the end of this course, students will be able to:								
a) Interpr	nterpret basic statistical terminologies.								
b) Explair	n assumpt	tions and con	ditions for basic	statistical techniques, and judge whic	h statistical technique to use	e in a given situation.			
c) Condu	Explain assumptions and conditions for basic statistical techniques, and judge which statistical technique to use in a given situation. Conduct basic statistical techniques both by hand and using a statistical software, and present results using publication quality tables.								
d) Descri	be results	s of statistical	analysis using s	standard statistical expressions.					
Lecture p	plan			Γ			1		
No	Date	Time	Room	Lecture theme	Staff	Learning objectives•			
						Learning methods•			
						Instructions			
1	5/26	08:50-10:20	On-demand	Lecture: Introduction to Biostatistics	TAKAHASHI Kunihiko				
				(online video)					
2	5/26	10:45-12:15	On-demand	Lecture: Data presentation; Numerical	ANZAI Tatsuhiko				
				summary measures (1) (online video)					
3	5/27	08:50-10:20	On-demand	Lecture: Data presentation; Numerical	ANZAI Tatsuhiko				
				summary measures (2) (online video)					
4	5/27	10:45-12:15	On-demand	Lecture: Probability and Theoretical	ANZAI Tatsuhiko				
				distributions (1) (online video)					
5	5/29	08:50-10:20	On-demand	Lecture: Probability and Theoretical	TAKAHASHI Kunihiko				
				distributions (2) (online video)					
6	5/29	10:45-12:15	On-demand	Lecture: Estimation (online video)	TAKAHASHI Kunihiko				
7	5/29	13:30-15:00	On-demand	Laboratory session (online video)	TAKAHASHI Kunihiko,	Optional 1			
					ANZAI Tatsuhiko				
	L			<u> </u>					

8         5/29         1525-1655         Om-demand Optional 2         Laboratory session (online video)         TAKAHASHI Kunihiko, AIZAI Tatsuhiko         Optional 2           9         5/30         0650-1020         Om-demand data (1) (online video)         TAKAHASHI Kunihiko         Optional 2           10         5/30         1045-1215         Om-demand data (2) (online video)         TAKAHASHI Kunihiko, ANZAI Tatsuhiko         Optional 3           11         5/30         1525-1655         Live         Q&A session (online video)         TAKAHASHI Kunihiko, ANZAI Tatsuhiko         Optional 4           13         6/2         0650-1020         Om-demand Laboratory session (online video)         TAKAHASHI Kunihiko, ANZAI Tatsuhiko         Optional 4           14         6/2         0850-1020         Om-demand Lecture: Comparing groups – categorical data (online video)         ANZAI Tatsuhiko         Optional 4           15         6/2         1330-1500         Om-demand Laboratory session (online video)         TAKAHASHI Kunihiko, ANZAI Tatsuhiko         Optional 5           16         6/2         1525-1655         Om-demand Laboratory session (online video)         TAKAHASHI Kunihiko, ANZAI Tatsuhiko         Optional 6           17         6/3         0830-1020         Om-demand Confline video)         Lecture: Kuleivariate analysis (1) (online video)         TAKAHASHI							
AtZAI Tatsuhiko         AtZAI Tatsuhiko           9         5/30         0850-1020         Om-demand data (1) (online video)         TAKAHASHI Kunhiko           10         5/30         1045-1215         Om-demand data (2) (online video)         TAKAHASHI Kunhiko           11         5/30         1330-1500         Om-demand         Lecture: Comparing groups - continuous data (2) (online video)         TAKAHASHI Kunhiko, ANZAI Tatsuhiko         Optional 3           11         5/30         1525-1655         Live         Q&A session (online video)         TAKAHASHI Kunhiko, ANZAI Tatsuhiko         Optional 4           13         6/2         0850-1020         Om-demand         Lecture: Comparing groups - categorical data (online video)         ANZAI Tatsuhiko         Optional 4           14         6/2         1045-1215         Om-demand         Lecture: Comparing groups - categorical data (online video)         ANZAI Tatsuhiko         Optional 5           15         6/2         1330-1500         Om-demand         Lecture: Comparing groups - categorical data (online video)         TAKAHASHI Kunhiko, Optional 5         Optional 5           16         6/2         1525-1655         Om-demand         Laboratory session (online video)         TAKAHASHI Kunhiko, Optional 6         Optional 6           17         6/3         0455-1215         Om-d	8	5/29	15:25-16:55	On-demand	Laboratory session (online video)	TAKAHASHI Kunihiko,	Optional 2
9       5/30       08:50-1020       On-demand       Lecture: Comparing groups - continuous data (1) (online video)       TAKAHASHI Kunihiko         10       5/30       1045-1215       On-demand       Lecture: Comparing groups - continuous data (2) (online video)       TAKAHASHI Kunihiko,       Optional 3         11       5/30       13:30-1500       On-demand       Laboratory session (online video)       TAKAHASHI Kunihiko,       Optional 3         12       5/30       15:25-1655       Live       Q&A session (via real-time zoom)       TAKAHASHI Kunihiko,       Optional 4         13       6/2       06:50-1020       On-demand       Lecture: Comparing groups - categorical data (online video)       ANZAI Tatsuhiko       Optional 4         14       6/2       1045-1215       On-demand       Lecture: Analysis of Varince; Multiple data (online video)       ANZAI Tatsuhiko       Optional 5         15       6/2       13:30-1500       On-demand       Laboratory session (online video)       TAKAHASHI Kunihiko, ANZAI Tatsuhiko       Optional 5         16       6/2       15:25-1655       On-demand       Laboratory session (online video)       TAKAHASHI Kunihiko, ANZAI Tatsuhiko       Optional 6         17       6/3       08:50-1020       On-demand       Lecture: Correlation; linear regression (online video)       TAKAHASHI Kunihiko,<						ANZAI Tatsuhiko	
Image: Constraint of the second sec	9	5/30	08:50-10:20	On-demand	Lecture: Comparing groups - continuous	TAKAHASHI Kunihiko	
10       5/30       10.45-12.15       Orn-demand       Lecture: Comparing groups - continuous data (2) (online video)       TAKAHASHI Kunihiko, ANZAI Tatsuhiko       Optional 3         11       5/30       13.30-15.00       Orn-demand       Laboratory session (online video)       TAKAHASHI Kunihiko, ANZAI Tatsuhiko       Optional 4         12       5/30       1525-1655       Live       Q&A session (via real-time zoom)       TAKAHASHI Kunihiko, ANZAI Tatsuhiko       Optional 4         13       6/2       08:0-10.20       Orn-demand       Lecture: Comparing groups - categorical data (online video)       ANZAI Tatsuhiko       Optional 4         14       6/2       10.45-12.15       Orn-demand       Lecture: Analysis of Variance; Multiple comparison (online video)       ANZAI Tatsuhiko       Optional 5         15       6/2       13.30-15:00       Orn-demand       Laboratory session (online video)       TAKAHASHI Kunihiko, ANZAI Tatsuhiko       Optional 6         16       6/2       105-12:15       Orn-demand       Lecture: Correlation; linear regression (online video)       TAKAHASHI Kunihiko, ANZAI Tatsuhiko       Optional 6         17       6/3       08:00-1020       Orn-demand       Lecture: Correlation; linear regression (online video)       TAKAHASHI Kunihiko, ANZAI Tatsuhiko       Optional 7         18       6/3       1045-12:15					data (1) (online video)		
Image: Constraint of the state state state of the state of the state of the state of t	10	5/30	10:45-12:15	On-demand	Lecture: Comparing groups - continuous	TAKAHASHI Kunihiko	
115/301330-1500On-demandLaboratory session (online video)TAKAHASHI Kunihko, ANZAI TatsuhikoOptional 3125/301525-1655LiveQ&A session (via real-time zoom)TAKAHASHI Kunihko, ANZAI TatsuhikoOptional 4136/20850-1020On-demandLecture: Comparing groups - categorical data (online video)ANZAI TatsuhikoOptional 4146/21045-12:15On-demandLecture: Analysis of Variance; Multiple comparison (online video)ANZAI TatsuhikoOptional 5156/21330-1500On-demandLaboratory session (online video)TAKAHASHI Kunihiko, ANZAI TatsuhikoOptional 6166/21525-1655On-demandLaboratory session (online video)TAKAHASHI Kunihiko, ANZAI TatsuhikoOptional 6176/30850-1020On-demandLecture: Correlation; linear regression (online video)TAKAHASHI Kunihiko, ANZAI TatsuhikoOptional 6186/31045-12:15On-demandLecture: Correlation; linear regression (online video)TAKAHASHI Kunihiko, ANZAI TatsuhikoOptional 7196/313:30-1500On-demandLaboratory session (online video)TAKAHASHI Kunihiko, ANZAI TatsuhikoOptional 7206/31525-16:55On-demandLaboratory session (online video)TAKAHASHI Kunihiko, ANZAI TatsuhikoOptional 8216/508:50-1020On-demandLaboratory session (online video)TAKAHASHI Kunihiko, ANZAI TatsuhikoOptional 8226/5 </td <td></td> <td></td> <td></td> <td></td> <td>data (2) (online video)</td> <td></td> <td></td>					data (2) (online video)		
Image: constraint of the second sec	11	5/30	13:30-15:00	On-demand	Laboratory session (online video)	TAKAHASHI Kunihiko,	Optional 3
125/301525-1655LiveQ&A session (via real-time zoom) ANZAI TatsuhikoTAKAHASHI Kunhiko, ANZAI TatsuhikoOptional 4136/20850-1020Om-demand deta (online video)Lecture: Comparing groups - categorical data (online video)ANZAI Tatsuhiko146/210.45-12.15Om-demand om-demandLecture: Analysis of Variance; Multiple comparison (online video)ANZAI TatsuhikoOptional 5156/213.30-1500Om-demand om-demandLaboratory session (online video)TAKAHASHI Kunhiko, ANZAI TatsuhikoOptional 6166/215.25-16.55Om-demand om-demandLaboratory session (online video)TAKAHASHI Kunhiko, ANZAI TatsuhikoOptional 6176/308:50-1020Om-demand om-demandLecture: Correlation; linear regression (online video)TAKAHASHI Kunhiko, ANZAI TatsuhikoOptional 6186/310.45-12.15Om-demand om-demandLecture: Multivariate analysis (1) (online video)TAKAHASHI Kunhiko, ANZAI TatsuhikoOptional 7196/313.30-1500Om-demand om-demandLaboratory session (online video)TAKAHASHI Kunhiko, ANZAI TatsuhikoOptional 8206/315.25-16.55Om-demand om-demandLaboratory session (online video)TAKAHASHI Kunhiko, ANZAI TatsuhikoOptional 8216/50.450-1020Om-demand om-demandLecture: Multivariate analysis (2) (online video)ANZAI TatsuhikoOptional 8226/510.45-12.15Om-demand <br< td=""><td></td><td></td><td></td><td></td><td></td><td>ANZAI Tatsuhiko</td><td></td></br<>						ANZAI Tatsuhiko	
Image: Constraint of the constra	12	5/30	15:25-16:55	Live	Q&A session (via real-time zoom)	TAKAHASHI Kunihiko,	Optional 4
136/208:50-1020On-demandLecture: Comparing groups - categorical data (online video)ANZAI Tatsuhiko146/21045-12:15On-demandLecture: Analysis of Variance; Multiple comparison (online video)ANZAI Tatsuhiko156/21330-1500On-demandLaboratory session (online video)TAKAHASHI Kunihiko, ANZAI TatsuhikoOptional 5166/21525-16:55On-demandLaboratory session (online video)TAKAHASHI Kunihiko, ANZAI TatsuhikoOptional 6176/308:50-1020On-demandLecture: Correlation; linear regression (online video)TAKAHASHI Kunihiko, ANZAI TatsuhikoOptional 6186/31045-12:15On-demandLecture: Wultivariate analysis (1) (online video)TAKAHASHI Kunihiko, ANZAI TatsuhikoOptional 7196/31330-15:00On-demandLaboratory session (online video)TAKAHASHI Kunihiko, ANZAI TatsuhikoOptional 7206/508:50-1020On-demandLaboratory session (online video)TAKAHASHI Kunihiko, ANZAI TatsuhikoOptional 8216/508:50-1020On-demandLecture: Multivariate analysis (2) (online video)ANZAI TatsuhikoOptional 8226/51045-12:15On-demandLecture: Multivariate analysis (3) (online video)ANZAI TatsuhikoOptional 9236/51330-15:00On-demandLecture: Multivariate analysis (3) (online video)ANZAI TatsuhikoOptional 9						ANZAI Tatsuhiko	
Image: constraint of the second sec	13	6/2	08:50-10:20	On-demand	Lecture: Comparing groups - categorical	ANZAI Tatsuhiko	
146/210.45–12.15On-demandLecture: Analysis of Variance; Multiple comparison (online video)ANZAI TatsuhikoOptional 5156/213.30–15.00On-demandLaboratory session (online video)TAKAHASHI Kunihiko, ANZAI TatsuhikoOptional 5166/215.25–16.55On-demandLaboratory session (online video)TAKAHASHI Kunihiko, ANZAI TatsuhikoOptional 6176/308.50–10.20On-demandLecture: Correlation; linear regression (online video)TAKAHASHI Kunihiko, ANZAI TatsuhikoOptional 6186/310.45–12.15On-demandLecture: Correlation; linear regression (online video)TAKAHASHI Kunihiko, ANZAI TatsuhikoOptional 7196/313.30–15.00On-demandLaboratory session (online video)TAKAHASHI Kunihiko, ANZAI TatsuhikoOptional 7206/315.25–16.55On-demandLaboratory session (online video)TAKAHASHI Kunihiko, ANZAI TatsuhikoOptional 7216/508.50–10.20On-demandLecture: Multivariate analysis (2) (online video)ANZAI TatsuhikoOptional 8226/510.45–12.15On-demandLecture: Multivariate analysis (3) (online video)ANZAI TatsuhikoOptional 9236/513.30–15.00On-demandLaboratory session (online video)TAKAHASHI Kunihiko, ANZAI TatsuhikoOptional 9					data (online video)		
Image: comparison (online video)Comparison (online video)TAKAHASHI Kunihiko, ANZAI TatsuhikoOptional 5156/21330-1500On-demandLaboratory session (online video)TAKAHASHI Kunihiko, ANZAI TatsuhikoOptional 6166/21525-16.55On-demandLaboratory session (online video)TAKAHASHI Kunihiko, ANZAI TatsuhikoOptional 6176/308:50-1020On-demandLecture: Correlation; linear regression (online video)TAKAHASHI Kunihiko, ANZAI TatsuhikoOptional 6186/310:45-12:15On-demandLecture: Multivariate analysis (1) (online video)TAKAHASHI Kunihiko, ANZAI TatsuhikoOptional 7196/313:30-15:00On-demandLaboratory session (online video)TAKAHASHI Kunihiko, ANZAI TatsuhikoOptional 7206/315:25-16:55On-demandLaboratory session (online video)TAKAHASHI Kunihiko, ANZAI TatsuhikoOptional 8216/508:50-10:20On-demandLecture: Multivariate analysis (2) (online video)ANZAI TatsuhikoOptional 8226/510:45-12:15On-demandLecture: Multivariate analysis (3) (online video)ANZAI TatsuhikoOptional 9236/513:30-15:00On-demandLaboratory session (online video)TAKAHASHI Kunihiko, ANZAI TatsuhikoOptional 9	14	6/2	10:45-12:15	On-demand	Lecture: Analysis of Variance; Multiple	ANZAI Tatsuhiko	
156/213:30-15:00Om-demandLaboratory session (online video)TAKAHASHI Kunihiko, ANZAI TatsuhikoOptional 5166/215:25-16:55Om-demandLaboratory session (online video)TAKAHASHI Kunihiko, ANZAI TatsuhikoOptional 6176/308:50-10:20Om-demandLecture: Correlation; linear regression (online video)TAKAHASHI Kunihiko, ANZAI TatsuhikoOptional 6186/310:45-12:15Om-demandLecture: Correlation; linear regression (online video)TAKAHASHI Kunihiko, ANZAI TatsuhikoOptional 7196/313:30-15:00Om-demandLaboratory session (online video)TAKAHASHI Kunihiko, ANZAI TatsuhikoOptional 7206/315:25-16:55Om-demandLaboratory session (online video)TAKAHASHI Kunihiko, ANZAI TatsuhikoOptional 8216/508:50-10:20Om-demandLecture: Multivariate analysis (2) (online video)ANZAI TatsuhikoOptional 8226/510:45-12:15Om-demandLecture: Multivariate analysis (3) (online video)ANZAI TatsuhikoOptional 9236/513:30-15:00Om-demandLaboratory session (online video)TAKAHASHI Kunihiko, ANZAI TatsuhikoOptional 9					comparison (online video)		
Image: constraint of the symbol of the sym	15	6/2	13:30-15:00	On-demand	Laboratory session (online video)	TAKAHASHI Kunihiko,	Optional 5
166/21525-16:55On-demandLaboratory session (online video)TAKAHASHI Kunihiko, ANZAI TatsuhikoOptional 6176/308:50-10:20On-demandLecture: Correlation; linear regression (online video)TAKAHASHI KunihikoOptional 6186/310:45-12:15On-demandLecture: Multivariate analysis (1) (online video)TAKAHASHI KunihikoOptional 7196/313:30-15:00On-demandLaboratory session (online video)TAKAHASHI Kunihiko, ANZAI TatsuhikoOptional 7206/315:25-16:55On-demandLaboratory session (online video)TAKAHASHI Kunihiko, ANZAI TatsuhikoOptional 8216/508:50-10:20On-demandLecture: Multivariate analysis (2) (online video)ANZAI TatsuhikoOptional 8226/510:45-12:15On-demandLecture: Multivariate analysis (3) (online video)ANZAI TatsuhikoOptional 9236/513:30-15:00On-demandLecture: Multivariate analysis (3) (online video)ANZAI TatsuhikoOptional 9						ANZAI Tatsuhiko	
Image: constraint of the symbol of the sym	16	6/2	15:25-16:55	On-demand	Laboratory session (online video)	TAKAHASHI Kunihiko,	Optional 6
176/308:50-10:20On-demandLecture: Correlation; linear regression (online video)TAKAHASHI Kunihiko186/310:45-12:15On-demandLecture: Multivariate analysis (1) (online video)TAKAHASHI Kunihiko196/313:30-15:00On-demandLaboratory session (online video)TAKAHASHI Kunihiko, ANZAI TatsuhikoOptional 7206/315:25-16:55On-demandLaboratory session (online video)TAKAHASHI Kunihiko, ANZAI TatsuhikoOptional 8216/508:50-10:20On-demandLecture: Multivariate analysis (2) (online video)ANZAI TatsuhikoOptional 8226/510:45-12:15On-demandLecture: Multivariate analysis (3) (online video)ANZAI TatsuhikoOptional 8236/513:30-15:00On-demandLecture: Multivariate analysis (3) (online video)ANZAI TatsuhikoOptional 9236/513:30-15:00On-demandLaboratory session (online video)TAKAHASHI Kunihiko, ANZAI TatsuhikoOptional 9						ANZAI Tatsuhiko	
Image: constraint of the section of	17	6/3	08:50-10:20	On-demand	Lecture: Correlation; linear regression	TAKAHASHI Kunihiko	
186/310:45–12:15On-demandLecture: Multivariate analysis (1) (online video)TAKAHASHI Kunihiko196/313:30–15:00On-demandLaboratory session (online video)TAKAHASHI Kunihiko, ANZAI TatsuhikoOptional 7206/315:25–16:55On-demandLaboratory session (online video)TAKAHASHI Kunihiko, ANZAI TatsuhikoOptional 8216/508:50–10:20On-demandLecture: Multivariate analysis (2) (online video)ANZAI TatsuhikoOptional 8226/510:45–12:15On-demandLecture: Multivariate analysis (3) (online video)ANZAI TatsuhikoOptional 9236/513:30–15:00On-demandLaboratory session (online video)TAKAHASHI Kunihiko, ANZAI TatsuhikoOptional 9					(online video)		
Image: constraint of the second sec	18	6/3	10:45-12:15	On-demand	Lecture: Multivariate analysis (1)	TAKAHASHI Kunihiko	
196/313:30–15:00On-demandLaboratory session (online video)TAKAHASHI Kunihiko, ANZAI TatsuhikoOptional 7206/315:25–16:55On-demandLaboratory session (online video)TAKAHASHI Kunihiko, ANZAI TatsuhikoOptional 8216/508:50–10:20On-demandLecture: Multivariate analysis (2) (online video)ANZAI TatsuhikoOptional 8226/510:45–12:15On-demandLecture: Multivariate analysis (3) (online video)ANZAI TatsuhikoOptional 9236/513:30–15:00On-demandLaboratory session (online video)TAKAHASHI Kunihiko, ANZAI TatsuhikoOptional 9					(online video)		
Image: Non-demand series of the series of	19	6/3	13:30-15:00	On-demand	Laboratory session (online video)	TAKAHASHI Kunihiko,	Optional 7
206/315:25–16:55On-demandLaboratory session (online video)TAKAHASHI Kunihiko, ANZAI TatsuhikoOptional 8216/508:50–10:20On-demandLecture: Multivariate analysis (2) (online video)ANZAI TatsuhikoANZAI Tatsuhiko226/510:45–12:15On-demandLecture: Multivariate analysis (3) (online video)ANZAI TatsuhikoANZAI Tatsuhiko236/513:30–15:00On-demandLaboratory session (online video)TAKAHASHI Kunihiko, ANZAI TatsuhikoOptional 9 ANZAI Tatsuhiko						ANZAI Tatsuhiko	
Image: Non-demand series of the series of	20	6/3	15:25-16:55	On-demand	Laboratory session (online video)	TAKAHASHI Kunihiko,	Optional 8
21       6/5       08:50-10:20       On-demand       Lecture: Multivariate analysis (2) (online video)       ANZAI Tatsuhiko         22       6/5       10:45-12:15       On-demand       Lecture: Multivariate analysis (3) (online video)       ANZAI Tatsuhiko         23       6/5       13:30-15:00       On-demand       Laboratory session (online video)       TAKAHASHI Kunihiko, ANZAI Tatsuhiko       Optional 9						ANZAI Tatsuhiko	
Image: Constraint of the system       22     6/5     10:45–12:15     On-demand     Lecture: Multivariate analysis (3) (online video)     ANZAI Tatsuhiko     Image: Constraint of the system       23     6/5     13:30–15:00     On-demand     Laboratory session (online video)     TAKAHASHI Kunihiko, ANZAI Tatsuhiko     Optional 9	21	6/5	08:50-10:20	On-demand	Lecture: Multivariate analysis (2)	ANZAI Tatsuhiko	
22       6/5       10:45-12:15       On-demand       Lecture: Multivariate analysis (3) (online video)       ANZAI Tatsuhiko         23       6/5       13:30-15:00       On-demand       Laboratory session (online video)       TAKAHASHI Kunihiko, ANZAI Tatsuhiko       Optional 9					(online video)		
Image: Constraint of the system     Constraint of the system     Constraint of the system     Constraint of the system       23     6/5     13:30–15:00     On-demand     Laboratory session (online video)     TAKAHASHI Kunihiko, ANZAI Tatsuhiko     Optional 9	22	6/5	10:45-12:15	On-demand	Lecture: Multivariate analysis (3)	ANZAI Tatsuhiko	
23     6/5     13:30–15:00     On-demand     Laboratory session (online video)     TAKAHASHI Kunihiko, ANZAI Tatsuhiko     Optional 9					(online video)		
ANZAI Tatsuhiko	23	6/5	13:30-15:00	On-demand	Laboratory session (online video)	TAKAHASHI Kunihiko,	Optional 9
						ANZAI Tatsuhiko	
24 6/5 15:25−16:55 Live Q&A session (via real–time zoom) TAKAHASHI Kunihiko, Optional 10	24	6/5	15:25-16:55	Live	Q&A session (via real-time zoom)	TAKAHASHI Kunihiko,	Optional 10
ANZAI Tatsuhiko						ANZAI Tatsuhiko	
25 6/6 08:50–10:20 On-demand Lecture: Survival analysis (online ANZAI Tatsuhiko	25	6/6	08:50-10:20	On-demand	Lecture: Survival analysis (online	ANZAI Tatsuhiko	
video)					video)		
26 6/6 10:45–12:15 On-demand Lecture: Genomics data analysis ANZAI Tatsuhiko	26	6/6	10:45-12:15	On-demand	Lecture: Genomics data analysis	ANZAI Tatsuhiko	
(online video)					(online video)		

# Lecture Style

This course will consist of lectures and optional laboratory sessions (online video). Q&A system on WebClass and some optional hours will be prepared. There will be some reports. (Details will be announced later.)

## **Course Outline**

Refer to the course schedule

## Grading System

Grades will be based on the following elements:

Participation (Watch online video (Lecture): 60% or more) 50%

Reports 50%

## Prerequisite Reading

Reading materials will be available online at the course webpage. Students are expected to have worked thorough the materials before attending the corresponding class.

#### Module Unit Judgment

2 units

### **Reference Materials**

Pagano M, Gauvreau K. Principles of Biostatistics. 2nd ed. Belmont: Brooks/Cole; 2000.

Rosner B. Fundamentals of Biostatistics. 8th ed. Brooks/Cole; 2015.

Altman DG. Practical Statistics for Medical Research. Chapman & Hall; 1991.

Armitage P. Statistical Methods in Medical Research. 4th ed. Blackwell Science Ltd; 2002.

## Important Course Requirements

For students not in the MPH course, instructor's permission is required before registering to the course. Also, students are required to have TOEFL iBT with a minimum score of 80 or IELTS with a minimum score of 6.5. Please submit an email when you receive permission through the Forms below. https://forms.office.com/r/iVjqUEipAR

#### Note(s) to Students

Online Q&A system is available during the course, and a realtime Q&A session (optional, May 30 and June 5, 2025, via zoom or face-to-face class) is prepared.

This course uses the Stata and other statistical software. Stata is available for each student during the course.

Students are expected to perform basic algebra, including logarithms and exponentials, by hand or using calculator.

This course is a prerequisite for Biostatisitcs  ${\rm I\!I}\,/{\rm Introduction}$  to Biostatistics.

Email

TAKAHASHI Kunihiko: biostat.dsc@tmd.ac.jp

Instructor's Contact Information

TAKAHASHI Kunihiko: Weekdays only. Advanced appointments are required.

Contact to Department of Biostatistics, M&D Data Science Center (E-mail: biostat.dsc@tmd.ac.jp).