

(Teaching Practicum: Mathematics (II) (IB)) National Taiwan Normal University

Online Course Curriculum Plan

Guideline: Pursuant to Article 6 of the Implementation Regulations Regarding Distance Learning by Universities, Departments/Programs offering distance learning courses, shall present a course plan and submit it for approval by the university-level academic affairs committee. The course plan referred to in the preceding paragraph shall set forth learning objectives, the target student group, a course outline, teaching methods, interactive student-teacher discussion, grading and course requirements. The course plan shall be posted on the Internet.

1. Course start date: spring semester of 2022 (academic year):

2. Course review submission record:

It is a new digital course or an existing face-to-face course switching to digital format in this semester

It is an existing digital course; the latest University's Course Committee approval was in the spring semester of 2021 (academic year)

Approved by the University's Course Committee and within the 5-year validity period.

The 5-year validity period has expired; a new application is required.

In case of a major change in the original approved course or if the revision ratio exceeds 30%, reapplication is required.

3. Basic Course Information (check ✓ if applicable)

(1)	Course Chinese Name	數學教學實習 (二) (IB)
(2)	Course English Name	Teaching Practicum: Mathematics (II) (IB)
(3)	Teaching Format	<input type="checkbox"/> Asynchronous Distance Teaching <input checked="" type="checkbox"/> Synchronous Distance Teaching Broadcast University Please fill-in the sign-off university and department for this course: (1) University: National Taiwan Normal University Department: Mathematics
(4)	Instructor Name & Title	Adjunct assistant professors: Dr. Patricia Alexander 、 Dr. Simon Morgan
(5)	Instructor Source	<input checked="" type="checkbox"/> Appointed by Departments <input type="checkbox"/> Appointed by General Education Center <input type="checkbox"/> Both of Above <input type="checkbox"/> Other
(6)	The Name of the Course Unit (or the college and department name)	The Department of Mathematics
(7)	Course Level	<input type="checkbox"/> Undergraduate Program <input type="checkbox"/> Master's Program <input checked="" type="checkbox"/> Undergraduate-master Program Joint Course <input type="checkbox"/> Undergraduate-postgraduate Joint Course <input type="checkbox"/> PhD Program <input type="checkbox"/> Continuing Education Master's Program
(8)	Program Type	<input checked="" type="checkbox"/> Full-time Program <input type="checkbox"/> Part-time Program <input type="checkbox"/> Other
(9)	Course Type	<input type="checkbox"/> Common Courses <input type="checkbox"/> General Courses <input type="checkbox"/> School Required Courses <input checked="" type="checkbox"/> Professional Courses <input type="checkbox"/> Educational Courses <input type="checkbox"/> Other

(10)	Which Unit Offered This Course?	<input type="checkbox"/> University <input type="checkbox"/> College <input type="checkbox"/> Graduate Institute <input checked="" type="checkbox"/> Department <input type="checkbox"/> Other
(11)	Course Duration	<input checked="" type="checkbox"/> One Semester (half year) <input type="checkbox"/> Two Semesters (one year) <input type="checkbox"/> Other
(12)	Course Attribute	<input type="checkbox"/> Required <input checked="" type="checkbox"/> Elective <input type="checkbox"/> Other
(13)	Number of Credits	2 credits
(14)	Weekly Face-to-Face Class Hours	<u> 2 </u> hour(s)/week (For asynchronous remote teaching, fill-in the average weekly "face-to-face" hours, which include classroom face-to-face and synchronized remote teaching hours. Divide the total "face-to-face" semester hours by the total number of course weeks.)
(15)	Number of Classes	1
(16)	Estimated Total Number of Students	10
(17)	Fully English-Taught Course	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
(18)	Cooperative Foreign University (Please fill-in the cooperative universities if applicable)	Names of foreign cooperative universities and departments/institutes: _____ <input type="checkbox"/> Domestic Broadcast <input type="checkbox"/> Domestic Sign-off <input type="checkbox"/> Overseas Special Program <input type="checkbox"/> Dual-Degree Program <input type="checkbox"/> Other
(19)	Course Platform URL (must be filled-in for asynchronous teaching)	NTNU online learning platform: https://moodle.ntnu.edu.tw/
(20)	Curriculum Plan URL	http://courseap.itc.ntnu.edu.tw/acadmOpenCourse/index.jsp

4. Course Teaching Design and Implementation Method

(1)	Learning Objectives	<ol style="list-style-type: none"> To experience mathematics teaching and learning situations in contexts of regular senior high schools and of IBDP schools To advance the competences to realize teaching and learning theories in teaching practice under the consideration of real-life contexts To flexibly implement a variety of teaching skills To cultivate professional disposition of mathematics education 						
(2)	Target Student Group	Students who are taking IBEC Program-International Mathematics Education or Bilingual Mathematics Education Program or Mathematics Education Program.						
(3)	Prerequisite(s)	Teaching Materials and Methods: Mathematics						
(4)	Course Content Outline: Please fill in the weekly teaching content and course outline (multiple teaching methods can be selected and filled in, for example: If the weekly face-to-face teaching is 2 hours and asynchronous teaching is 1 hour, write 2 in the "face-to-face" field, write 1 in the "asynchronous" field, and leave the "synchronous" field blank)							
	Week	Topics	Learning Goal (Brief Description)	Teaching Interactive Design (topic discussion, peer review, etc.)	Testing/Evaluation Activities (omit if not designed for the week)	Teaching Method and Hours (fill-in the number of hours, omit if none)		
						Classroom Face-to-Face Teaching	Remote learning	
							Asynch-ronous	Synchr-onized
1	Introduction to the course and online environment test	To understand course requirements						2
2	Good mathematics teaching	1. To understand what is good mathematics teaching? 2. To understand the characteristics of mathematics education in	Topic discussion					2

			IBDP						
	3	Real mathematics teaching context	1. To review strategies for teaching, learning, and assessments 2. To experience real mathematics teaching and learning situations in the context of IB international schools	Topic discussion					2
	4	Developing lesson plans for the teaching practicum	1. To analyze the learning and teaching goals for the teaching practicum. 2. To discuss possible teaching approaches to reach the goals.	Topic discussion, Group discussion					2
	5	Developing lesson plans for the teaching practicum	3. To design, plan and discuss mathematical tasks and activities.	Topic discussion, Group discussion					2

		6	Talk by IB teacher	Hear a talk by an IB/Bilingual teacher about how to teach IB/bilingual mathematics	Topic discussion, Group discussion		2		
		7	Micro-teaching practice	1. To conduct micro-teaching practice. 2. To evaluate and discuss the micro-teaching.	Peer review	Evaluation of the Micro-teaching practice			2
		8	Micro-teaching practice	1. To conduct micro-teaching practice. 2. To evaluate and discuss the micro-teaching.	Peer review	Evaluation of the Micro-teaching practice		2	
		9	Micro-teaching practice	1. To conduct micro-teaching practice. 2. To evaluate and discuss the micro-teaching.	Peer review	Evaluation of the Micro-teaching practice		2	
		10	Micro-teaching practice	1. To conduct micro-teaching practice. 2. To evaluate and discuss the micro-teaching.	Peer review	Evaluation of the Micro-teaching practice		2	
		11	Micro-teaching practice	1. To conduct micro-teaching practice. 2. To evaluate	Peer review	Evaluation of the Micro-teaching practice		2	

			and discuss the micro-teaching.						
12	Micro-teaching practice	1. To conduct micro-teaching practice. 2. To evaluate and discuss the micro-teaching.	Peer review	Evaluation of the Micro-teaching practice		2			
13	Micro-teaching practice	1. To conduct micro-teaching practice. 2. To evaluate and discuss the micro-teaching.	Peer review	Evaluation of the Micro-teaching practice		2			
14	Micro-teaching practice	1. To conduct micro-teaching practice. 2. To evaluate and discuss the micro-teaching.	Peer review	Evaluation of the Micro-teaching practice		2			
15	Micro-teaching practice	1. To conduct micro-teaching practice. 2. To evaluate and discuss the micro-teaching.	Peer review	Evaluation of the Micro-teaching practice		2			
16	Talk by IB or Bilingual teacher	Hear a talk by an IB/Bilingual teacher about how to teach IB/bilingual mathematics	Topic discussion, Group discussion		2				

		17	Evaluation and reflection on the IBDP teaching	1. To evaluate, compare, and discuss the mathematics teaching in teacher candidates' micro-teaching 2. To reflect on the beliefs about mathematics, and the learning and teaching in the context of the IBDP school.	Topic discussion, Peer review	Evaluation of the assignment report		2		
		18	Evaluation and reflection on the IBDP teaching	3. To talk about what and how to improve the learning and teaching of mathematics.	Topic discussion, Peer review	Evaluation of the assignment report		2		
(5)	Teaching Method	(if included, check ✓; multiple choices allowed) <input checked="" type="checkbox"/> 1. Provide primary and supplementary materials for online courses <input checked="" type="checkbox"/> 2. Provide online asynchronous teaching: <u>10</u> time(s), total hour(s): <u>20</u> hour(s) <input checked="" type="checkbox"/> 3. Have online teacher or online assistant <input checked="" type="checkbox"/> 4. Provide face-to-face teaching, number: <u>2</u> time(s), total hour(s): <u>4</u> hour(s) <input checked="" type="checkbox"/> 5. Provide online synchronous face-to-face teaching, number: <u>6</u> time(s), total hour(s): <u>12</u> hour(s) <input checked="" type="checkbox"/> 6. Provide topic discussion activities <input checked="" type="checkbox"/> 7. Provide cooperative learning activities between students <input type="checkbox"/> 8. Other: (please specify)								
(6)	Learning Management	Does the content include the following roles and functions (if included, check ✓; multiple choices allowed)								

	System	<p>1. For learning management system database management by the system administrator</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Personal data <input checked="" type="checkbox"/> Course information <input type="checkbox"/> Other related information management functions <p>2. Provide the necessary learning management system functions for teachers (teaching assistants) and students</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Latest News release, browse <input checked="" type="checkbox"/> Textbook content design, viewing, download <input type="checkbox"/> Grade system management & inquiry <input checked="" type="checkbox"/> Perform online testing, release <input checked="" type="checkbox"/> Learning information <input checked="" type="checkbox"/> Interactive learning design (chat room or discussion area) <input type="checkbox"/> Function presentation for various teaching activities <input type="checkbox"/> Other related functions (please specify)
(7)	Public Information about Interactive Teaching	<p>Instructor Profile and Published Works (webpage link instructions can be attached):</p> <p><u>Dr. Patricia Alexander</u>: PhD in Education, Goldsmiths, University of London 2005- Goldsmith College – PGCE Secondary Mathematics Tutor 1997- 2005 London Metropolitan University - Senior Lecturer PGCE/BA, Secondary Mathematics Course Tutor 1997. Highbury Grove School - Assistant Deputy Head (Curriculum) 1990-1994 Visiting Lecturer at London Metropolitan University (part-time secondment) Teachers working with children with Special Educational Needs in Mathematics 1990-1991 Advisory Teacher Secondment - Haringey Curriculum Support Group for Teachers to develop resources for children from multicultural background 1987-1991 Northumberland Park School - Deputy Head of Mathematics 1987. Northumberland Park School - Teacher of Mathematics, posts of responsibility</p> <p><u>Dr. Simon Morgan</u>: PhD in Mathematics, Rice University Houston Texas 2015-now Visiting Researcher Department of Physics Imperial College London. 2010-now Software developer for Data Constructs Limited UK 2007-2009 Post Doctoral Researcher at Los Alamos National Laboratory, USA 2002-2007 Assistant Professor University of Minnesota Department of Mathematics</p> <p>Instructor E-mail: Dr. Patricia Alexander patricia.alexander19@gmail.com Dr. Simon Morgan morga084@gmail.com</p>

		Online Office Hours (at least 1 hour per week): Wednesday 17:30-18:30 / Friday 19:30-20:30
		Teaching Assistant's Name/E-mail (omit if inapplicable): TBA
		Other(omit if inapplicable):
(8)	Course Material Production	(if included, check✓; multiple choices allowed) <input checked="" type="checkbox"/> 1.Provides appropriate reminders of key points <input checked="" type="checkbox"/> 2.Provides teaching-related examples <input checked="" type="checkbox"/> 3.Provides teaching-related exercises and reflective activities <input checked="" type="checkbox"/> 4.Provides supplementary teaching materials or online resources <input checked="" type="checkbox"/> 5.Provides instructions for self-directed learning <input checked="" type="checkbox"/> 6.Unit goals are consistent with course goals <input type="checkbox"/> 7.Other:
(9)	Assignment Submission Method	(if included, check✓; multiple choices allowed) <input checked="" type="checkbox"/> 1.Provides online assignment content description <input type="checkbox"/> 2.Online real-time assignment <input checked="" type="checkbox"/> 3.Assignment file upload and download <input type="checkbox"/> 4.Online testing <input type="checkbox"/> 5.Grade inquiry 6.Other:
(10)	Grading Method	※ To comply with the spirit of online course design, you must understand and agree to the contents of the following 3 items, and provide detailed description after checking ✓ the box for item 3) <input checked="" type="checkbox"/> 1.The course can provide evaluation results and feedback for each learning evaluation <input checked="" type="checkbox"/> 2.The evaluation has taken the students online learning history and participation level into account <input checked="" type="checkbox"/> 3.The percentage of each score is explained in detail below: (testing method and items, and their total score percentage) Assignment report 30%, Discussion 20%, Micro-teaching practice 50%
(11)	Precautions for Class:	The course is the Fully English-Taught Course. The course must be select along with “Teaching Practicum: Mathematics (II)”. The graduate student without the education program must contact the department for the issue of course-selecting.

(12)	<p><u>Observe intellectual property rights in the creation of course content.</u></p> <ul style="list-style-type: none">※ Pay attention to any infringement of copyright or other rights in the creation of relevant teaching content.※ If the copyright for any part of the teaching content is owned by others and authorization has been obtained from the rights holder, please indicate the source of the material.
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