(English Language of Mathematics Teaching)
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: _fall_ semester of _2021_ (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 ____ semester of ____ (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 ✓or■ if applicable)

(1)	Course Chinese Name	數學教學中的英語
(2)	Course English Name	English Language of Mathematics Teaching
(3)	Teaching Format	□Asynchronous Distance Teaching ■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 professor: Dr. Simon Morgan
(5)	Instructor Source	■Appointed by Departments □Appointed by General Education Center □Both of Above □Other
(6)	The Name of the Course Unit (or the college and department name)	The Department of Mathematics
(7)	Course Level	□Undergraduate Program □Master's Program ■Undergraduate-master Program Joint Course □Undergraduate-postgraduate Joint Course □PhD Program □Continuing Education Master's Program
(8)	Program Type	■Full-time Program □Part-time Program □Other
(9)	Course Type	□Common Courses □General Courses □School Required Courses ■Professional Courses □Educational Courses □Other

(10)	Which Unit Offered This Course?	☐University ☐College ☐Graduate Institute ■Department ☐Other
(11)	Course Duration	■One Semester (half year) ☐Two Semesters (one year) ☐Other
(12)	Course Attribute	☐Required ■Elective ☐Other
(13)	Number of Credits	2 credits
(14)	Weekly Face-to-Face Class Hours	_2 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	■Yes ☐No
(18)	Cooperative Foreign University (Please fill-in the cooperative universities if applicable)	Names of foreign cooperative universities and departments/institutes: _____ ☐Domestic Broadcast ☐Domestic Sign-off ☐Overseas Special Program ☐Dual-Degree Program ☐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

<table>
<tr><td>(1)</td><td>Learning Objectives</td><td>1. Learn Vocabulary
2. Learn common sentence and question structures.
3. Learn typical confusions for mathematical English and everyday English
4. Develop conversational and questioning skills
5. Writing questions and assignments
6. Collaborative and presentation skills</td></tr>
<tr><td>(2)</td><td>Target Student Group</td><td>Students who are taking IBEC Program-International Mathematics Education or Bilingual Mathematics Education Program or Mathematics Education Program.</td></tr>
<tr><td>(3)</td><td>Prerequisite(s)</td><td>1. Differentiated Instruction in Mathematics
2. Inquiry and Practice in Mathematics
3. Teaching Materials and Methods: Mathematics
4. Curriculum Development and Design</td></tr>
<tr><td>(4)</td><td colspan="2">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)
<table>
<tr><td rowspan="2">Week</td><td rowspan="2">Topics</td><td rowspan="2">Learning Goal (Brief Description)</td><td rowspan="2">Teaching Interactive Design (topic discussion, peer review, etc.)</td><td rowspan="2">Testing/Evaluation Activities (omit if not designed for the week)</td><td colspan="3">Teaching Method and Hours (fill-in the number of hours, omit if none)</td></tr>
<tr><td>Classroom Face-to-Face Teaching</td><td colspan="2">Remote learning</td></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td></td><td>Asynch-ronous</td><td>Synchr-onized</td></tr>
<tr><td>1</td><td>Vocabulary, pronunciation, and sentence and question structures</td><td>To know vocabulary, pronunciation, and sentence and question structures</td><td>Topic discussion</td><td></td><td></td><td></td><td>2</td></tr>
<tr><td>2</td><td>Vocabulary, pronunciation, and sentence and question structures</td><td>Same as above.</td><td>Topic discussion</td><td></td><td></td><td></td><td>2</td></tr>
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</td></tr>
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		3	Vocabulary, pronunciation, and sentence and question structures	Same as above.	Topic discussion	Online tasks			2	
		4	Confusions in everyday and mathematical English.	To analyze confusions in everyday and mathematical English.	Topic discussion, Group discussion				2	
		5	Confusions in everyday and mathematical English.	Same as above	Topic discussion, Group discussion	Assignment			2	
		6	Presentation of assignments, spoken and written	To understand presentation of assignments, spoken and written	Topic discussion				2	
		7	Presentation of assignments, spoken and written	Same as above	Topic discussion				2	
		8	Presentation of assignments, spoken and written	Same as above	Topic discussion	Online tasks			2	
		9	Presentation of multiple solutions	To understand presentation of multiple solutions	Problem base learning	Assignment			2	
		10	Discussion of different methods and alternatives	To discuss of different methods and alternatives	Topic discussion, Group discussion				2	
		11	Discussion of different methods and alternatives	Same as above	Topic discussion, Group discussion	Case study reports			2	

		12	Diagnostic questioning	To conduct diagnostic questioning	Group discussion				2
		13	Diagnostic questioning	Same as above	Group discussion	Case study reports			2
		14	Deep case study collaborative assignment with individual, reports and presentations	To design, plan and discuss deep case study collaborative assignment with individual, reports and presentations	Group discussion				2
		15	Deep case study collaborative assignment with individual, reports and presentations	Same as above	Peer review	Presentation			2
		16	Deep case study collaborative assignment with individual, reports and presentations	Same as above	Peer review	Presentation			2
		17	Deep case study collaborative assignment with individual, reports and presentations	Same as above	Peer review	Presentation			2
		18	Deep case study collaborative assignment with individual, reports and presentations	Same as above	Peer review	Presentation			2
(5)	Teaching		(if included, check □; multiple choices allowed)						

	Method	■ 1. Provide primary and supplementary materials for online courses ☐ 2. Provide online asynchronous teaching ■ 3. Have online teacher or online assistant ☐ 4. Provide face-to-face teaching, number: ____ time(s), total hour(s): ____ hour(s) ■ 5. Provide online synchronous face-to-face teaching, number: 18 time(s), total hour(s): 36 hour(s) ■ 6. Provide topic discussion activities ■ 7. Provide cooperative learning activities between students ☐ 8. Other: (please specify)
(6)	Learning Management System	Does the content include the following roles and functions (if included, check □; multiple choices allowed) 1. For learning management system database management by the system administrator ■ Personal data ■ Course information ☐ Other related information management functions 2. Provide the necessary learning management system functions for teachers (teaching assistants) and students ■ Latest News release, browse ■ Textbook content design, viewing, download ☐ Grade system management & inquiry ■ Perform online testing ■ Release learning information ■ Interactive learning design (chat room or discussion area) ☐ Function presentation for various teaching activities ☐ Other related functions (please specify)
(7)	Public Information about Interactive Teaching	Instructor Profile and Published Works (webpage link instructions can be attached): *Dr. Simon Morgan*: 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
		Instructor E-mail: Dr. Simon Morgan morga084@gmail.com

		Online Office Hours (at least 1 hour per week): Wednesday 17:30-18:30
		Teaching Assistant's Name/E-mail (omit if inapplicable): TBA
		Other(omit if inapplicable):
(8)	Course Material Production	(if included, check □; multiple choices allowed) ■ 1.Provides appropriate reminders of key points ■ 2.Provides teaching-related examples ■ 3.Provides teaching-related exercises and reflective activities ■ 4.Provides supplementary teaching materials or online resources ■ 5.Provides instructions for self-directed learning ■ 6.Unit goals are consistent with course goals □ 7.Other:
(9)	Assignment Submission Method	(if included, check □; multiple choices allowed) ■ 1.Provides online assignment content description □ 2.Online real-time assignment ■ 3.Assignment file upload and download □ 4.Online testing □ 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)** ■ 1.The course can provide evaluation results and feedback for each learning evaluation ■ 2.The evaluation has taken the students online learning history and participation level into account ■ 3.The percentage of each score is explained in detail below: (testing method and items, and their total score percentage) Assignment 20%, Discussion 15%, Attendances 5%, Presentation 20%, Case study reports 20%, Contribute to online tasks 20%
(11)	Precautions for Class:	The course is the Fully English-Taught Course. Vocabulary and language use for mathematics teaching and development of conversational English language skills for teaching. The graduate student without the education

		program must contact the department for the issue of course-selecting.
(12)	**<u>Observe intellectual property rights in the creation of course content.</u>** ※ 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.	