Toyama College	Year	2020	Course Title	航海測位論Ⅱ

Course Information

Course Code	0068	Course Category	Specialized / Compulsory
Class Format	Lecture	Credits	School Credit: 1
Department	Department of Maritime Technology	Student Grade	3rd
Term	First Semester	Classes per Week	2
Textbook and/or Teaching Materials	Lecture material URL is http://www2.nc-toyama.ac.jp/~mkawai/lecture/sailing/sailing.html		
Instructor	Kawai Masashi		

Course Objectives

Course objective is to obtain the ability to calculate distance and course from a departure point to an arrival point, position of an arrival point in terrestrial navigation.
(1) Understanding technical terms on terrestrial navigation and obtaining the ability to explain them.
(2) Obtaining the ability to explain rhumb line sailing and great circle sailing in terrestrial navigation.
(3) Obtaining the ability to calculate navigatinal papameters of sailing of every kind in terrestrial navigation.
(4) Obtaining the ability to calculate distance and course from a departure point to an arrival point, position of an arrival point in great circle sailing.

Rubric

	Ideal Level of Achievement	Standard Level of Achievement	Unacceptable Level of Achievement)
Evaluation 1	Obtaining the ability to explain technical terms in detail in various sailing	Obtaining the ability to roughly explain technical terms in various sailings	Not obtaining the ability to explain technical terms in various sailing
Evaluation 2	Obtaining the ability to explain rhumb line sailing and great circle sailing, and use them for navigation	Obtaining the ability to explain rhumb line sailing and great circle sailing	Understanding features of rhumb line sailing and great circle sailing
Evaluation 3	Obtaining the ability to calculate navigational parameters in various sailing accurately and certainly	Obtaining the ability to calculate navigational parameters in various sailing	Understanding calculation method of navigational parameters in various sailing

Assigned Department Objectives

MCCコア科目

Teaching Method

Outline	There are lectures and practices on calculation method of middle latitude sailing, mercator sailing and great circle sailing on sphere in terrestrial navigation.
Style	Lecture by a teacher
Notice	This lecture corresponds to subjects required to study by the law for ship's officer. The subjects are parallel sailing, middle latitude sailing, mercator sailing and great circle sailing in terrestrial navigation. It is evaluated by exams(70%) and reports(30%). The recognition of credit requires a rating of 60 points or more.

Course Plan

			Theme	Goals
1st Semester	1st Quarter	1st	Guidance and lecture on outline and a history of sailing	Obtaining the ability to explain a definition of sailing, and classification and history of sailing.
		2nd	The basis of rhumb line sailing	Obtaining the ability to explain terms on rhumb line sailing.
		3rd	The same as above	Understanding navigational papameters in sailing, furthermore the relation between middle latitude and departure and notices on calculating navigational parameters in sailing by a calculator.
		4th	Mean middle latitude sailing	Understanding basic formulas and calculation algorithm of mean middle latitude sailing.
		5th	The same as above	Understanding calculation methods of mean middle latitude sailing.
		6th	Practice of mean middle latitude sailing	Obtaining the ability to calculate ploblems of mean middle latitude sailing.
		7th	The same as above	The same as above
		8th	Mid-term exam	Test understanding of contents from 1st week to 7th week.
	2nd Quarter	9th	Mercator sailing	Understanding basic formulas and calculation algorithm of mercator sailing.
		10th	The same as above	Understanding calculation methods of mercator sailing.
		11th	Practice of mercator sailing	Obtaining the ability to calculate ploblems of mercator sailing.
		12th	The same as above	The same as above
		13th	Great circle sailing	Understanding basic formulas of navigational papameters, and calculation methods in great circle sailing.
		14th	The same as above	The same as above
		15th	Regular exam	Test understanding of contents from 9th week to 14th week.

		16th	Return regular exams, check the markings by themselves and carry out a questionnaire survey.	

Evaluation Method and Weight (%)

	Examination	Presentation	Mutual Evaluations between students	Behavior	Portfolio	Other	Total
Subtotal	70	0	0	0	0	30	100
Basic Ability	35	0	0	0	0	15	50
Technical Ability	35	0	0	0	0	15	50
Interdisciplinary Ability	0	0	0	0	0	0	0