| Toyama College | Year | 2022 | Course <br> Title | Mathematics II B |
| :--- | :--- | :--- | :--- | :--- |
| Course Information | Course Category | General / Elective |  |  |
| Course Code | 0071 | Credits | School Credit: 1 |  |
| Class Format | Lecture | Student Grade | 2nd |  |
| Department | Department of International Business | Classes per Week | 2 |  |
| Term | Second Semester |  |  |  |
| Textbook and/or <br> Teaching Materials |  |  |  |  |
| Instructor | Sakurai Hideto,Nitta Yoshinori |  |  |  |

## Course Objectives

At the completion of this course, students will be able to understand and carry out fundamental calculations on trigonometric functions correctly.

## Rubric

|  | Ideal Level | Standard Level | Unacceptable Level |
| :--- | :--- | :--- | :--- |
| Achievement 1 | Clearly understands, and is able <br> to carry out fundamental <br> calculations on trigonometric <br> ratios and functions. | Ability to understand and carry <br> out fundamental calculations on <br> trigonometric ratios and <br> functions. | Does not display understanding <br> and is unable to carry out <br> fundamental calculations on <br> trigonometric ratios and <br> functions. |
| Achievement 2 | Clearly understands, and is able <br> to carry out fundamental <br> calculations on the graphs of <br> trigonometric functions. | Ability to understand and carry <br> out fundamental calculations on <br> the graphs of trigonometric <br> functions. | Does not display understanding <br> and is unable to carry out <br> fundamental calculations on <br> the graphs of trigonometric <br> functions. |
| Achievement 3 | Clearly understands, and is able <br> to carry out fundamental <br> calculations on trigonometric <br> equations and inequalities. | Ability to understand and carry <br> out fundamental calculations on <br> trigonometric equations and <br> inequalities. | Does not display understanding <br> and is unable to carry out <br> fundamental calcalations on <br> trigonometric equations and <br> inequalities. |

## Assigned Department Objectives

## Teaching Method

| Outline | In this course, students will learn about basic mathematics, specifically: trigonometric ratios and functions. <br> And, students will make basics calculations of them. |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :---: | :---: | :---: | :---: |
| Style | Lectures and exercises |  |  |  |  |  |  |
| Notice | The recognition of credit requires 50 points or more rating. |  |  |  |  |  |  |
| Characteristics of Class / Division in Learning |  |  |  |  |  |  |  |
| $\square$ Active Learning | $\square$ Aided by ICT | $\square$ Applicable to Remote Class | $\square$ <br> Experienced |  |  |  |  |

Course Plan

|  |  |  | Theme | Goals |
| :---: | :---: | :---: | :---: | :---: |
| 2nd Semeste r | 3rd Quarter | 1st | Guidance | Guidance: Discuss the goals and structure of this course. |
|  |  | 2nd | Trigonometric ratios | Learn the definition and the basic property of trigonometric ratios. |
|  |  | 3 rd | Law of Sines | Learn the low of sines. |
|  |  | 4th | Law of Cosines | Learn the low of cosines. |
|  |  | 5th | Radian -1- | Learn the definition and the basic property of radians. |
|  |  | 6th | Radian -2- | Learn the definition and the basic property of radians. |
|  |  | 7th | Trigonometric function-1- | Learn the definition and the basic property of trigonometric functions. |
|  |  | 8th | Midterm exam | Midterm examination. |
|  | 4th Quarter | 9th | Trigonometric function -2- | Learn the basic property of trigonometric functions. |
|  |  | 10th | Trigonometric function -3- | Learn the graphs of trigonometric functions. |
|  |  | 11th | Trigonometric equation | Learn how to solve trigonometric equations. |
|  |  | 12th | Trigonometric inequality | Learn how to solve trigonometric inequalities. |
|  |  | 13th | Trigonometric Addition Formulas -1- | Learn the definition and the basic property of trigonometric addition formulas. |
|  |  | 14th | Trigonometric Addition Formulas -2- | Learn some applications of trigonometric addition formulas. |
|  |  | 15th | Final exam | Final examination. |
|  |  | 16th | Summary | Summarize the study content and confirm grades. |

Evaluation Method and Weight (\%)

| Examination | Presentation | Mutual <br> Evaluations <br> between <br> students | Behavior | Portfolio | Other | Total |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |


| Subtotal | 70 | 0 | 0 | 0 | 0 | 30 | 100 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Basic <br> Proficiency | 70 | 0 | 0 | 0 | 0 | 30 | 100 |
| Specialized <br> Proficiency | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cross Area <br> Proficiency | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

