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| Tsuyama College  |   | Year | 2021   |                  | Course Title   | Trans Exercise of All Program II |
| Course Information   |   |      |  |                  |  |                                  |
| Course Code  | 0061  |      |  | Course Category  | Specialized / Compulsory   |                                  |
| Class Format   | Seminar   |      |  | Credits          | Academic Credit: 4   |                                  |
| Department   | Department of Integrated Science and Technology Communication and Informations System Program   |      |  | Student Grade    | 4th  |                                  |
| Term   | Year-round  |      |  | Classes per Week | 2  |                                  |
| Textbook and/or Teaching Materials   | The books designated by each teacher, articles on the Internet, textbooks and reference books used in class, friends, etc., are all teaching materials.   |      |  |                  |  |                                  |
| Instructor   | TAKETANI Hisashi  |      |  |                  |  |                                  |
| Course Objectives  |   |      |  |                  |  |                                  |
| Learning purposes :<br>To acquire engineering design and teamwork skills by grasping the purpose of the theme, recognizing what needs to be prepared, utilizing one's own expertise and communicating with other specialties to solve problems that have arisen, and devising ways to solve them.  |   |      |  |                  |  |                                  |
| Course Objectives :<br>◎1. To be able to recognize what you need to prepare and proceed with your studies.<br>◎2. To be able to understand the issues to be solved and be able to learn autonomously.<br>◎3. To be able to proceed systematically with an awareness of the goal.<br>◎4. To be able to be creative while being aware of the role of other members.<br>◎5. To be able to make a presentation in the final presentation in a way that is easy to understand and devise, and be able to debate accurately. |   |      |  |                  |  |                                  |
| Rubric   |   |      |  |                  |  |                                  |
|  | Excellent   |      | Good   |                  | Acceptable   |                                  |
| Achievement 1  | ・ The student can grasp the current situation and goals, find issues in the deviations, understand the causal relationship and priority of the issues, try to find out the main causes, and propose action to solve them.<br>・ The student can summarize, organize, and structure the essence of complex events.  |      | ・ The student can grasp the current situation and goals, find issues in their discrepancies, and understand the basic methods for collecting, analyzing, and organizing information necessary for solutions.<br>・ The student can understand the essence of events objectively and logically, and choose the best option.  |                  | ・ The student can grasp the current situation and goals, find issues in the gap between them, and understand the basic methods for collecting, analyzing, and organizing information necessary for solutions.<br>・ The student can understand the essence of events objectively and logically, and be able to select almost appropriate options.   |                                  |
| Achievement 2  | ・ The student can demonstrate his or her own ability to improve the situation in his or her group.<br>・ The student can manage daily life and make every effort to maintain good conditions.  |      | ・ The student can understand the importance of independent action and take action on his or her own initiative.<br>・ The student can manage his or her daily life and act responsibly.   |                  | ・ The student can understand the importance of independent action and perform mostly satisfactory actions.<br>・ The student can manage daily life and behave responsibly in general.   |                                  |
| Achievement 3  | ・ The student can listen to the opinions of the group, express his or her own opinions, and form a consensus for the purpose.<br>・ The student can act with an awareness of being a member of a society.<br>・ The student can understand the necessity, rules, and manners of teamwork, control his or her own emotions, respect the opinions of others, communicate appropriately, and collaborate with others with a sense of ownership.<br>・ The student can set a good example of conduct ahead of others. The student can explain verbally, encourage appropriate cooperative behavior in others, and promote collaborative work and research. |      | ・ The student can listen to the opinions of the group, express his or her own opinions, and understand his or her individual role in the group.<br>・ The student can understand the importance of a sense of responsibility and take basic actions.<br>・ The student can understand the items necessary for teamwork to help the organization function effectively.<br>・ The student can understand the role of leaders for the effective functioning of the organization. |                  | ・ The student can respond to the opinions of the group, express his or her own opinions, and generally understand his or her individual roles in the group.<br>・ The student can understand the importance of responsibility and can take basic actions.<br>・ The student can generally understand the items necessary for teamwork for the organization to function effectively.<br>・ The student can understand the role of leaders for effective functioning of the organization. |                                  |

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| Achievement 4 | <ul style="list-style-type: none"> <li>• The student can use ICT, ICT tools, texts, etc. for basic information gathering and dissemination.</li> </ul> | <ul style="list-style-type: none"> <li>• The student can handle ICT, ICT tools, texts, etc. for information gathering and dissemination, and to understand the application and future potential of ICT.</li> </ul> | <ul style="list-style-type: none"> <li>• The student can handle ICT, ICT tools, texts, etc. for information gathering, utilization, and transmission.</li> </ul> | Has not reached the required standards. |
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#### Assigned Department Objectives

#### Teaching Method

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| Outline | <p>General or Specialized : Specialized<br/>Field of learning : Interdisciplinary subjects and others<br/>Foundational academic disciplines : Subjects studied in 1st, 2nd and 3rd year</p> <p>Relationship with Educational Objectives :<br/>This class is equivalent to "(4) Develop multi-disciplinary ability", "(5) Attain a global perspective and understanding of social development", "(6) Develop problem solving ability" and "(7) Develop communication and presentation abilities".</p> <p>Relationship with JABEE programs :<br/>Advanced Science Program : The main goal of learning / education in this class is "(D)".<br/>Mechanical Systems Program : The main goal of learning / education in this class is "(A), (A-3)", also "(D-1)" and "(F-2)" are involved. This is a course with university equivalent content and is related to the JABEE Programs.<br/>Electrical and Electronic Systems Program : The main goal of learning / education in this class is "(D), (D-1)", also "(F-1)" are involved. This is a course with university equivalent content and is related to the JABEE Programs.<br/>Communication and Information Systems Program : The main goal of learning / education in this class is "(D), (D-2)", also "(F-1)" are involved. This is a course with university equivalent content and is related to the JABEE Programs.</p> <p>Course outline :<br/>In the first semester, the student works on problems while instructing younger students, making use of the ability to discover and solve problems that he or she has learned in the last year's Trans Exercise of All Program I (3rd year). In the first semester, the student deepens his or her understanding of the correct handling of information through the study of information security that should be considered in each field. In the second semester, the student will study the theme set by each student or the theme proposed by the faculty member for his or her Graduation Thesis (5th year) in his or her department.</p> |
| Style   | <p>Course method :<br/>In the first semester, the student works as a team to solve the current problems and set new goals for the theme, adding new juniors to the theme he or she has been working on in the last year's Trans Exercise of All Program I.<br/>In the second semester, the student studies the theme he or she has set or the theme presented by his or her instructors for his or her Graduation Thesis in his or her department.</p> <p>Grade evaluation method :<br/>Presentation at the final debriefing session and group presentations, and submission of the report by the deadline are prerequisites for evaluation in accordance with the following<br/>The final grade is 50% of the 1st semester's grade plus 50% of the 2nd semester's.<br/>The 1st semester's grade is 30% of the report + 40% of the status of exercises, etc. + 30% of the presentation (final debriefing session).<br/>The 2nd semester's grade is 30% of the report + 40% of the status of exercises, etc. + 30% of the presentation (group presentations).</p>  |
| Notice  | <p>Precautions on the enrollment :<br/>Students must take this class (no more than one-fifth of the required number of class hours missed) and earn the credit in order to complete the 4th year course.<br/>This is a class that requires study outside of class hours. A total of 45 hours of study is required per credit, including both class time and study outside class time. Follow the instructions of the instructor regarding study outside of class hours.</p> <p>Course advice :<br/>As a preparatory study to be done in advance, confirm the issues found in Trans Exercise of All Program I and think about the solutions to them.<br/>The objectives of this course are to develop engineering design skills to solve problems under limited conditions (by cooperating with the whole team), and to develop the ability to create new problems and solve them.</p> <p>Foundational subjects : Introduction to Science and Engineering (1st year), Fundamental Challenge Seminar (Advanced Science Program 2nd), Trans Exercise of All Program I (3rd), Subjects studied up to 3rd year, etc.<br/>Related subjects : Interdisciplinary subjects (5th year), etc.</p> <p>Attendance advice :<br/>To share problems with teammates in other fields of specialization (to improve communication skills) so that you can learn with an awareness of your own specialization (to enhance your own expertise), and at the same time, to find points of contact between other fields of specialization and your own (to improve interdisciplinary skills) and to devise ways to solve problems.</p>  |

#### Characteristics of Class / Division in Learning

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| <input checked="" type="checkbox"/> Active Learning | <input checked="" type="checkbox"/> Aided by ICT | <input checked="" type="checkbox"/> Applicable to Remote Class | <input type="checkbox"/> Instructor Professionally Experienced |
|---|--|--|--|

#### Required subjects

#### Course Plan

|              |             |     | Theme                                     | Goals  |
|--------------|-------------|-----|---|--|
| 1st Semester | 1st Quarter | 1st | Guidance<br>Information security training | To understand the educational objectives, learning content and assessment methods.<br>To understand the precautions in using the Internet. |

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|                                  |                   | 2nd         | Investigate and review the content of the theme, and develop a plan for exercises  | Learning and practice of general-purpose skills, attitudes and orientations, integrated learning experiences and creative thinking skills as interdisciplinary skills. |  |
|                                  |                   | 3rd         | Investigate and review the content of the theme, and develop a plan for exercises  | Same as above.   |  |
|                                  |                   | 4th         | Investigate and review the content of the theme, and develop a plan for exercises  | Same as above.   |  |
|                                  |                   | 5th         | Investigate and review the content of the theme, and develop a plan for exercises  | Same as above.   |  |
|                                  |                   | 6th         | Work towards the realization of each theme, including learning, production and experimentation   | Same as above.   |  |
|                                  |                   | 7th         | Work towards the realization of each theme, including learning, production and experimentation   | Same as above.   |  |
|                                  |                   | 8th         | (1st semester mid-term exam)   | Same as above.   |  |
|                                  | 2nd Quarter       | 9th         | Work towards the realization of each theme, including learning, production and experimentation   | Same as above.   |  |
|                                  |                   | 10th        | Work towards the realization of each theme, including learning, production and experimentation   | Same as above.   |  |
|                                  |                   | 11th        | Work towards the realization of each theme, including learning, production and experimentation   | Same as above.   |  |
|                                  |                   | 12th        | Work towards the realization of each theme, including learning, production and experimentation   | Same as above.   |  |
|                                  |                   | 13th        | Work towards the realization of each theme, including learning, production and experimentation<br>Preparation for the final debriefing session | Same as above.   |  |
|                                  |                   | 14th        | The final debriefing session   | Same as above.   |  |
|                                  |                   | 15th        | (1st semester final exam)  | Same as above.   |  |
|                                  |                   | 16th        | Summary of results (preparation and submission of the last semester's report)  | Same as above.   |  |
|                                  | 2nd Semester<br>r | 3rd Quarter | 1st  | Guidance   | To understand the educational objectives, learning content and assessment methods of each system |
| 2nd                              |                   |             | Study for graduation research in your department and practice assignments given by your department   | The details will be explained separately in the second semester guidance.  |  |
| 3rd                              |                   |             | Study for graduation research in your department and practice assignments given by your department   | Same as above.   |  |
| 4th                              |                   |             | Study for graduation research in your department and practice assignments given by your department   | Same as above.   |  |
| 5th                              |                   |             | Study for graduation research in your department and practice assignments given by your department   | Same as above.   |  |
| 6th                              |                   |             | Study for graduation research in your department and practice assignments given by your department   | Same as above.   |  |
| 7th                              |                   |             | Study for graduation research in your department and practice assignments given by your department   | Same as above.   |  |
| 8th                              |                   |             | (2nd semester mid-term exam)   | Same as above.   |  |
| 4th Quarter                      |                   | 9th         | Study for graduation research in your department and practice assignments given by your department   | Same as above.   |  |
|                                  |                   | 10th        | Study for graduation research in your department and practice assignments given by your department   | Same as above.   |  |
|                                  |                   | 11th        | Study for graduation research in your department and practice assignments given by your department   | Same as above.   |  |
|                                  |                   | 12th        | Study for graduation research in your department and practice assignments given by your department<br>Prepare for group presentations          | Same as above.   |  |
|                                  |                   | 13th        | Group presentations  | Same as above.   |  |
|                                  |                   | 14th        | Preparation of final report  |  |  |
|                                  |                   | 15th        | (2nd semester final exam)  | Same as above.   |  |
|                                  |                   | 16th        | Summary of results (preparation and submission of final report)  | Same as above.   |  |
| Evaluation Method and Weight (%) |                   |             |  |  |  |
|                                  |                   | Report      | Status of Exercises, etc.  | Presentation   | Total  |

|                         |    |    |    |     |
|-------------------------|----|----|----|-----|
| Subtotal                | 30 | 40 | 30 | 100 |
| Basic Proficiency       | 0  | 0  | 0  | 0   |
| Specialized Proficiency | 0  | 0  | 0  | 0   |
| Cross Area Proficiency  | 30 | 40 | 30 | 100 |