| Akashi College | | | | Year 2023 | | | C | ourse Title | Experiments of Electrical and Computer Engineering I | | |
|--|--|--|--|--|---|---|---|---|--|--|--|
| Course | Informa | tion | | | | | | | | | |
| Course Co | ode | 5233 | | | | Course Catego | Course Category Specialize | | d / Compulsory | | |
| Class Format Experin | | | nent | | | Credits | | School Credit: 2 | | | |
| Departme | Department Electrica | | l and Computer Engineering | | | Student Grade 2nd | | 2nd | | | |
| Term | | Second S | Semester | | | Classes per Week 4 | | | | | |
| Textbook Teaching | and/or Materials | Distribut | e materials in class | | | | | | | | |
| Instructor | Instructor KAJIMURA Yoshihiro,SUYAMA Taikei,HOSOKAWA Atsuishi,ENOMOTO Ryuji, | | | | | | | | | | |
| Evaluation Evaluation Evaluation Evaluation team men | Objectiv n point 1: n point 2: n point 3: mbers. | 'ES Can explain Can write a Can use the | n how In exp e nec | v to handle th periment repo cessary instru | ne necessary instru- ort. ments for an expe | uments for learr eriment safely, a | ning ele and cor | ectrical info nduct an ex | prmation engineering. | | |
| Rubric | | | | | | | | | | | |
| | | | Ideal Level | | | Standard Level | | | Unacceptable Level | | |
| Achievement 1 | | | | an explain how ecessary instr arning electric ngineering, ar operiment. | Can explain how to handle the necessary instruments for learning electrical information engineering. | | | Cannot explain how to handle the necessary instruments for learning electrical information engineering. | | | |
| Achievem | nent 2 | | Ca wi | an write an ex ith sufficient i | Can write an experiment report. | | | Cannot write an experiment report. | | | |
| Achievement 3 | | | Can use the necessary instruments for an experiment safely, and actively conduct an experiment in cooperation with team members. | | | Can use the necessary instruments for an experiment safely, and conduct an experiment in cooperation with the team members. | | | Cannot use the necessary instruments for an experiment safely, and conduct an experiment in cooperation with team members. | | |
| Assigned Department Objectives | | | | | | | | | | | |
| Teachin | a Metho | d | 2 | | | | | | | | |
| Outline The aim and Host | | | | of this course is to learn how to handle the necessary instruments for learning electrical information ring, and how to write reports. Several instructors will teach different experiment themes, and s will form groups of three to five people to conduct experiments on each theme. Suyama will teach related to measuring equipment, Enomoto matters related to electrical circuits, Kajimura sequencing, okawa DC bridges. | | | | | | | |
| Style | | Students provided write up it until th | dents will form groups of three to five people to conduct experiments on each theme. The themes are vided in Contents and Method of Course. After completing experiments on each theme, students must te up a report on the experiment and submit it the instructor teaching that theme. They will have to revise ntil they pass. This will help students learn the basics of writing up a report. | | | | | | | | |
| Notice | Students based or minimun for evalu passing of experime Students | Students will not be graded unless they have participated in all experiments. The overall evaluations will be based on the report submission and content (80%), and attitude toward the experiments (20%). The minimum score for a pass will be 60%. As this is an experiment course, submitting all reports is a prerequisite for evaluations. In addition, if all reports have not been received by the due date, students will not receive a bassing grade. Students must clean the lab and put away the equipment. Precautions regarding the experiments will be given during the first week. Students will not be graded unless they have participated in all experiments | | | | | | | | | |
| Charact | eristics | of Class / | Div | rision in Lea | arning | | | | | | |
| ☑ Active Learning | | | □ Aided by ICT | | | ☑ Applicable to Remote Class | | | Instructor Professionally Experienced | | |
| | | | | | | | | | | | |
| Course | Plan | | | | | | | | | | |
| | | | Then | ne | | | Goals | | | | |
| 2nd Semeste r | 3rd Quarter | 1st | Experiment guidance | | | | Under write (| stand the output of the output of the stand the standard standard standard standard standard standard standard s Standard standard stand | outline of experiments and how to t. | | |
| | | 2nd | Impedance measurement | | | | Impec circuit | lance meas , conduct a | surement experiment: create a a lab, and write up a report. | | |
| | | 3rd | Potentiometer | | | | Potent condu | tiometer ex ct a lab, ar | kperiment: create a circuit, nd write up a report. | | |
| | | 4th | Report organization | | | | Can w experi | Can write up a report on engineering experiments. | | | |
| | | 5th | Fall-of-potential method | | | | An exp create report | An experiment of the fall-of-potential method: create a circuit, conduct a lab, and write up a report. | | | |
| | | 6th | Report organization | | | | Can w experi | Can write up a report on engineering experiments. | | | |
| | | 7th | Oper | ational Ampli | | Opera Amp c a repo | Dperational Amplifier experiment: create a Amp circuit, confirm the Slew Rate, and wi a report. | | | | |
| | | 8th | DC b | oridges | | A DC I a lab, | A DC bridge experiment: create a circuit, co a lab, and write up a report. | | | | |
| | 4th Quarter | 9th | Report organization | | | | Can write up a report on engineering experiments. | | | | |

| | | | 10th | Relay sequence control 1 | | | | | Conduct a sequence control experiment using switches, motors, and relays, and write up a report. | | | |
|----------------------------------|------------------------|----|------|---|---|--|----------|---|---|-------|-------|--|
| | | | 11th | Relay sequence control 2 | | | | (| Continuing from the previous week, conduct an experiment of sequence control using switches, motors, and relays, and write up a report. | | | |
| | | | 12th | Digital oscilloscope and digital multimeter | | | | | A digital oscilloscope and digital multimeter experiment: create a circuit, conduct a lab, and write up a report. | | | |
| | | | 13th | leport organization | | | | | Can write up a report on engineering experiments. | | | |
| | | | 14th | Assembling a computer | | | | | A computer assembling experiment: create a circuit, conduct a lab, and write up a report. | | | |
| | | | 15th | Summary of engineering experiments | | | | | Can write up a report on engineering experiments. | | | |
| | | | 16th | No final exam | | | | | | | | |
| Evaluation Method and Weight (%) | | | | | | | | | | | | |
| | Report | | ort | Initiatives | | Mutual Evaluations between students | Behavior | | Portfolio | Other | Total | |
| Subtotal | | 80 | | 20 | | 0 | 0 | | 0 | 0 | 100 | |
| Basic Proficiency | Basic Proficiency 0 | | 0 | | 0 | 0 | | 0 | 0 | 0 | | |
| Specialized Proficiency 80 | | | 20 | | 0 | 0 | | 0 | 0 | 100 | | |
| Cross Area Proficiency | | 0 | | 0 | | 0 | 0 | | 0 | 0 | 0 | |