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| Course Name [科目名] | System Modelling And Analysis |
| Instructor Name [教員] | Mingcong Deng |
| Office Hours and Contact Information  [オフィスアワー、連絡先] | Location: Building 3-208  Telephone: +81-42-388-7134  E-mail: deng@cc.tuat.ac.jp  If you need my assistance, please give me an e-mail or telephone call. |
| Course Structure [授業形態] | Lecture and Exercise |
| Course Credits [単位数] | 3 |
| Course Overview [概要] | The lectures deal with control design of systems. Modelling method, stability and tracking performance of the systems are studied. In details, some design examples on electrical, mechanical and mechatronic systems are shown. By using MATLAB, simulations of the above mentioned systems are given. |
| Course Key Words [キーワード] | Modelling, Control, Systems, MATLAB |
| Academic Goal [目標] | 1. To understand the modelling methods of actual physical systems.  2. To study the control design of the real systems.  3. To undertake simulations by using MATLAB. |
| Course Schedule [授業内容] | Week 1: Orientation  Introduction to system modelling and analysis  Week 2: Fundamental of definitions of control systems  Real control system examples.  Week 3: Modelling method  How to obtain mathematical models of real systems (1)  Week 4: Modelling method  How to obtain mathematical models of real systems (2)  Systems presentation by MATLAB  Week 5: Conclusion (1)　TEST 1  Week 6: Control Design I  Electric systems control and simulation  Week 7: Control Design II  Mechanical systems control and simulation  Week 8: Control Design III  Mechatronic systems control and simulation  Week 9: Conclusion (2)　TEST 2  Week 10: Final Examination |
| Textbooks, References,  and Supplementary Materials | Studying materials given on or before the lectures |
| Grading Philosophy  (Percentage / Criteria / Methodology) | Participation in discussions during the lecture, oral presentation, and final examination or reports. |
| Other  (i.e. Expectations on Classroom  Conduct and Decorum etc.)  [その他] |  |