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| Course Name [科目名] | Quantum Mechanics |
| Instructor Name [教員] | Hiroki Minoda |
| Office Hours and Contact Information  [オフィスアワー、連絡先] | Location: Building 4-509  Telephone: +81-42-388-7114  E-mail: hminoda@cc.tuat.ac.jp  If you need my assistance, please give me an e-mail or telephone call. |
| Course Credits [単位数] | 3 |
| Course Overview [概要] | The aim of this course is to understand the fundamental concept of quantum physics. The lecture will start from the interpretation of the wave equation and several basic quantum systems will be discussed by using the Schrodinger equations. |
| Course Key Words [キーワード] |  |
| Academic Goal [目標] | 1. Students will be able to understand the principle of quantum physics.  2. Students will be able to apply the concept and the method of quantum physics to physical phenomena. |
| Course Schedule [授業内容] | Week 1: The wave function 1: Schrodinger equation and interpretation  Week 2: The wave function 2: Probability and operator  Week 3: time independent Schrodinger equation  Week 4: Infinite square well  Week 5: Harmonic Oscillator  Week 6: Free particles  Week 7: Delta function potential  Week 8: Finite square well  Week 9: Schrodinger equation in spherical coordinate  Week 10: The hydrogen atom |
| Textbooks, References,  and Supplementary Materials  [テキスト、参考書、その他] | Introduction to Quantum Mechanics (second edition)  David I. Griffiths  Prentice Hall |
| Grading Philosophy  (Percentage / Criteria / Methodology)  [成績評価の方法] | 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] |  |