CHEM 622 Organometallic Chemistry

Instructor: Prof. Oscar Navarro

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Office hours: Students are encouraged to meet with the instructor for questions, additional information or any other related matter. Office hours are every lecture day, one hour before the lecture, no appointment required. Any other time can be scheduled by appointment.

Classroom: 314C **Hours:** 9:00-10:15 pm, 3 credit hours

Textbook: "The Organometallic Chemistry of the Transition Metals", Robert H. Crabtree, 5th Ed. ISBN 978-0-470-25762-3

Course Policies:

1- There will be no makeup exams. If you miss an exam and have a valid excuse (doctor's note or equivalent), the weighting of the other exams will be adjusted accordingly.

2- Regular attendance in lecture is highly recommended. The aim of the lecture session is to guide you in your studies and to clarify, emphasize and illustrate the important concepts. Topics not included in the text will be covered in class and will appear in the tests. You are responsible for all information relayed in class whether you attend or not.

3- Academic dishonesty will not be tolerated. Cheating in the form of copying, plagiarism, altering information, or using cribs on exams will result in judicial proceedings in accordance with the University of Hawaii Student Conduct Code. See http://studentaffairs.manoa.hawaii.edu/policies/conduct_code/ for details.

Grading and Student Evaluation

Three exams each worth 33.3% of the final grade. The 3rd exam will be held during final exam week.

Everything will be graded from 0 to 100. *No curves will be applied*. Final grade ranges will be:

<34: F; 35-49: D; 50-64: C; 65-79: B; 80-100: A

Student Disabilities

The University of Hawaii is an equal opportunity/affirmative action institution, dedicated to teaching all students and reaching all learners. It is our commitment to make our lectures and classrooms accessible to all students. If you have a disability and have not voluntarily disclosed its nature and the support you need, you are invited to contact the KOKUA Program of UH (http://www.hawaii.edu/kokua/, phone (808) 956-7511), or talk with the instructor in order to get any accommodation you might need to take the course. This information will be kept confidential. Please do this as early in the course as possible.

<u>TENTATIVE</u> LECTURE SCHEDULE

Chapter 1: Introduction

Chapter 2: General properties of organometallic complexes

Chapter 3: Metal alkyls, aryls and hydrides and related σ-bonded ligands

Exam 1

Chapter 4: Carbonyls, phosphine complexes and ligand substitution reactions

Chapter 5: Complexes of π-bound ligands

Chapter 11: Metal-ligand multiple bonds

Chapter 15: Paramagnetic, high-oxidation-state and high-coordination-number complexes

Exam 2

Chapter 6: Oxidative addition and reductive elimination

Chapter 7: Insertion and elimination

Chapter 8: Nucleophilic and electrophilic addition and abstraction

Last lecture: December 9th

Exam 3: December 16th, 9:45-11:45