



**Principles & Practices of Mechanical Engineering  
Refresher Course – 6:00pm to 9:00pm  
University of Hawaii at Manoa, Holmes Hall, Rm. 242  
August thru October, 2007 – For October 26, 2007 Exam**

**QUESTIONS & ANSWERS INFORMATIONAL FLYER**

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The following questions and answers are provided to all qualified candidates that are interested in sitting in the Principles & Practices of Mechanical Engineering (P.E. – Mechanical) exam which is scheduled for Friday, October 26, 2007. These questions & answers will serve as a general guideline to the P.E. candidate in preparation for the upcoming exam.

1. Who are the sponsors of the P.E. Refresher Course?

*The American Society of Mechanical Engineers (ASME) – Hawaii Section is sponsoring the refresher course. For more information on ASME – Hawaii, please visit [www.sections.asme.org/hawaii](http://www.sections.asme.org/hawaii). Additional sponsors include the Department of Mechanical Engineering at the University of Hawaii at Manoa.*

2. Why is the ASME Hawaii Section sponsoring the P.E. Refresher course?

*By sponsoring and providing volunteer engineering professionals to conduct the P.E. Refresher course, the ASME Hawaii section is fulfilling it's mission in accordance with section by-laws which is to "promote the Arts & Science of mechanical engineering and allied arts and sciences; to encourage research; to foster engineering education; to advance the standards of engineering; to promote the networking of engineers among themselves and with allied technologists; and severally and in cooperation with other engineering and technical societies to broaden the usefulness of the engineering profession."*

3. Where will the P.E. Refresher course be held?

*The course location has been changed from Holmes Hall, Rm. 242 to Kuykendall Hall, Rm. 213. Parking will be available in the parking structure, in front of the Post Building or street parking where available. The Department of mechanical engineering is graciously coordinated the use of Kuykendall Room 213 for the course at no charge!*

4. What days and time will instructions be held?

*The instructions will be held on Tuesdays from 6:00pm to 9:00pm starting the week of July 31, 2007 (Tuesday).*

5. What is the frequency of instructions?

*The classes will be held every Tuesday nights at the times stated above and will recur every week up until the exam date scheduled for Friday, October 26, 2007. There*

*will be two mock exams provided to gauge the candidate's progress thru out the sessions. The 1<sup>st</sup> mock exam will focus on the breadth portion and the 2<sup>nd</sup> will focus on the depth portion of the exam.*

6. Who are the volunteer facilitators and instructors for the P.E. Refresher course?

*The volunteer facilitator will be Raymond Liu. Volunteer instructors are Dr. Charly Kinoshita and Dr. Steve Masutani, both practicing licensed engineers in Hawaii. Additional instructors may assist when available. However, this refresher course is not like a lecture course where candidates receive information. Instead, this non-traditional interactive course is where candidates will be highly involved in the learning and skill building activities. Emphasis on the use of the right equations, problem solving and interactive discussions on problem solutions will be a priority.*

7. How much will the course cost?

*The course fee for ASME members is \$300.00 and \$350.00 for non-ASME members. Funds received for the course fees will be used to offset costs for refreshments which will be provided mid-way thru each meeting session. A portion will be retained for a nominal fee for administrative costs (copying, certificates of completion, etc).*

8. What is the course based on?

*The refresher course will be based on the Mechanical Engineering Reference Manual, 12<sup>th</sup> Edition written by Michael R. Lindeburg, P.E. and updated for the breadth-and-depth PE exam. However, the candidate is encouraged to purchase the 12<sup>th</sup> Edition of the Mechanical Engineering Reference Manual (MERM) thru the ASME Hawaii website at a discount of 20% off. The candidates are also encouraged to purchase the Problem Solutions Manual. Please visit the ASME website at [www.sections.org/hawaii](http://www.sections.org/hawaii) for more information.*

9. What are the areas of focus for the course?

*The exam consists of 80 multiple choice questions from the fields of 1) thermal sciences, 2) machine design and 3)HVAC/R. Since Hawaii does not have much manufacturing and work in machine design, the course will focus heavily in thermal sciences (thermal dynamics, fluid mechanics, heat transfer) and HVAC/R. The subject of machine design will be touched upon during the latter part of the course.*

10. Will the candidate be provided with a reference manual?

*Unfortunately, the cost of the course does not include the reference manual. The candidate is highly encouraged to purchase the manual on his/her own and to keep it as a working reference on the job.*

11. What do I bring to the course?

*The purpose of the course is to bring mechanical engineers together to focus on passing the exam the first time. Engineers who have recently successfully passed the exam will be available to provide tips on what and what not to bring to the class and exam for a successful examination attempt.*

12. Will there be any review of subject matter in this course?

*In general, no review of fundamentals will be provided at the course. The candidate is expected to know the fundamentals of the subject matter or ask questions during the weekly meetings. The course will be designed to focus on the relevant sections to study for, the application of the correct formulas to use and mainly solving questions from the reference manual and other sources. The candidate is expected to study the fundamentals during the week prior to the Tuesday class or ask questions outside of the scheduled time for official instruction which is from 6:00pm to 9:00pm.*

13. Can the candidate stay longer to use the facilities to study and ask more questions?

*Yes, depending on need or desire, the room may be used until 10:00pm*

14. How do I determine if I qualify for the exam?

*The candidate will be responsible for determining whether he/she qualifies for the exam and to obtain and fill out all paperwork to the State of Hawaii Department of Commerce & Consumer Affairs – Professional & Vocational Licensing Division. The candidate is referred to <http://www.hawaii.gov/dcca/areas/pvl/boards/engineer/> in order to download pdf information and applications for submittal.*

15. What is the registration process for the P.E. exam, how much does it cost and what is the cost of other P.E. Refresher courses?

The exam is a national exam and administered by the National Council of Examiners for Engineering & Surveying (NCEES). The State of Hawaii – DCCA has a separate registration fee of \$75.00 (2005). Once the candidate gets approval from the State to take the exam, the candidate will need to separately apply and pay for the exam fees to NCEES in the amount of \$380.00 (2005). The total cost of exam registrations to the State and NCEES is \$455.00, excluding any fees paid for any refresher courses. The candidate is encouraged to visit [www.ncees.org](http://www.ncees.org) for information on application requirements and deadlines.

Other refresher courses cost in excess of \$700.00 as compared to the cost for the course sponsored by ASME Hawaii. The benefits of taking a local refresher course include:

- a. Networking with local engineers in the profession.
- b. Instruction from local practicing engineers and guidance from recently registered practicing mechanical engineers.
- c. Economical and more focused instructions and guidance.
- d. Extended support outside of instruction hours.

16. Does the candidate need to take the exam if taking this P.E. Refresher course?

*No. The candidate may choose to take any future P.E. exams given after the October 26, 2007 exam. However, this course is a good way to gauge your skills in taking future exams and to keep in touch with recent exam candidates.*

17. What if I take the exam and find that I didn't pass the exam? How much will it cost to take the exam again? Will I need to pay the full price to take the exam once more?

*The determination to pass the exam is up to the candidate. The more effort put forth in studying and working out problems during the refresher course, the better chances of passing. EFFORT OUTSIDE OF CLASS HOURS ARE REQUIRED!! However, there is no guarantee that taking the course will ensure successful examination.*

*In the event that the candidate is not successful on his/her first attempt, a nominal fee will apply toward re-examination for the subsequent exam giving in April the year thereafter. The candidate is referred to [www.ncees.org](http://www.ncees.org) for more information on re-examination dates and required fees. It is highly encouraged to also visit <http://www.hawaii.gov/dcca/areas/pvl/boards/engineer/> for any local requirements for re-examination.*

18. If I don't pass the exam the first time, can I take the P.E. refresher course again at a nominal fee?

*Depending on the number of interested candidates who qualify for subsequent exams and availability of instructors, there will be a nominal charge of \$100.00 for any qualified candidate interested in re-auditing the course. This nominal fee will again cover the cost for refreshments thru out the 13 course sessions.*

19. Who should I contact if I have any other questions about the P.E. Refresher course sponsored by ASME Hawaii and the University of Hawaii?

*The main point of contact for more information is Raymond Liu. He may be reached at 497-1395 or email at [liur020@hawaii.rr.com](mailto:liur020@hawaii.rr.com).*