

**DEPARTMENT OF MECHANICAL ENGINEERING, IUPUI  
FACULTY FEEDBACK FORM FOR COURSE OUTCOMES SURVEYS**

Note: This form is to be completed and submitted to the department by instructors at the end of each semester based on the survey results of courses taught. It is designed to monitor student learning, keep track of progress and changes made in the program, and allow faculty reflect upon the results. The survey results may be viewed from the department's survey database at <http://www.engr.iupui.edu/me/assessment/fsurveys.shtml>. The completed form is to be emailed to [hakay@iupui.edu](mailto:hakay@iupui.edu) (note: first save the file locally then email as an attachment).

Course: ME314	Year: 2006	Semester: Spring
Instructor: S.S. Krishnan	Survey Average: 3.73 (Out of 5)	Faculty Average: 4.09 (Out of 5)

- List the outcomes that did not meet the Department's current threshold of 3.75 out of 5.0 and explain the reasons. If all or most outcomes in your course are equal to or above 3.75, please reflect upon on the lowest two or three. Please state the outcomes as fully as possible, as in the course outcomes list, with the numbers same as on the list.

5. Calculate the rate of mass diffusion in one-dimensional problems, with or without bulk motion effects. [a4,e]

*Coverage of mass diffusion has been problematic in this course because of the limited time available to introduce these concepts. One possibility is to eliminate this topic but that will mean that it is never covered in our courses. This portion was identified as difficult this semester and video recording was taken of the introductory lecture. Some useful suggestions from that will be implemented the next time.*

7. Estimate convective transfer rates on the basis of geometric and dynamic similarity, and analogy between different convective transport processes. [a4, e]

*The wording of this outcome is too long and confusing. Perhaps this is due to misunderstanding about the terminology in the outcomes statement.*

11. Calculate and use the view factor for simple surface combinations, and the total emissivity for surfaces [a4, e]

9. Explain how radiation can be described based on its wavelength, source, and direction, and explain the basic concepts of blackbody radiation, reflectivity, emissivity, and absorptivity for surface radiation [a1, a4]

10. Apply the laws of radiation to compute heat transfer rates for surfaces such as black bodies and diffuse gray surfaces, with appropriate approximations. [a4, e]

*There was not enough time to cover the material in topics 11, 9 and 10 towards the end of the course. This is a problem of pacing the material.*

3. Sketch temperature profiles in one-dimensional heat transfer, showing the qualitative influences of energy generation, non-planar geometry or time dependence. [a4]

*This was covered specifically as lecture material and in a quiz in the beginning of the course and so this result is surprising. Perhaps the quiz should have been discussed more after the grading.*

- Were there any changes made to the course during the semester? If so, explain.

No.

3. Are there any recommendations for improvement?

Ideas regarding lecturing for difficult material like mass diffusion and radiation will be implemented. Pacing of material in convection can be faster since these mostly involve correlations while more time can be taken to cover the material on radiation.

4. Additional reflections/suggestions for assessment?

Please email to: [hakay@iupui.edu](mailto:hakay@iupui.edu). Thanks.