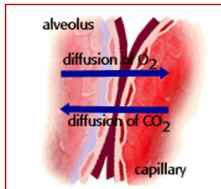




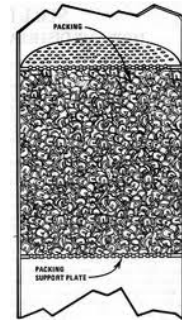
Transport Phenomena II

(0935342)



Introduction to the Course

Prof. Zayed Al-Hamamre



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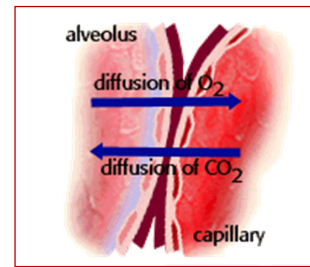
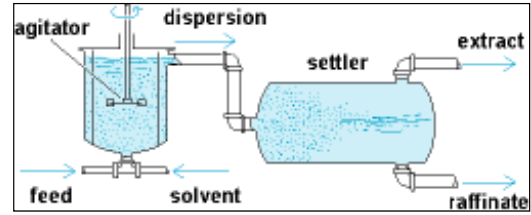
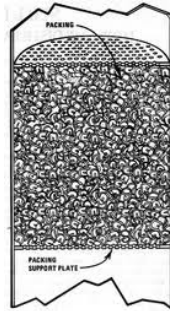
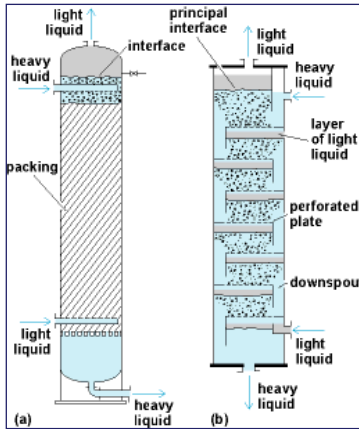
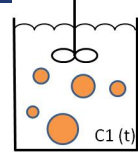


Course Objectives



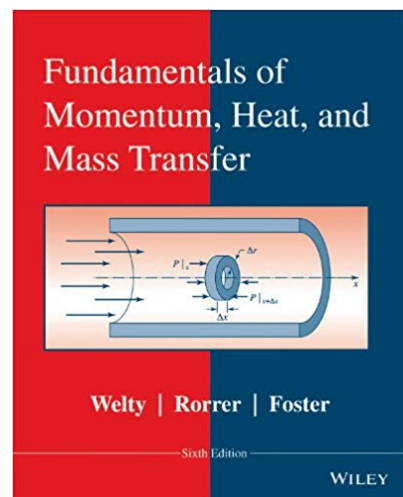
1. Emphasize the importance of mass transfer as a basic pillar of chemical engineering and its role in several separation processes
2. Introduce basic fundamentals of mass transfer essential to understand the engineering operations driven by this transport phenomenon





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Fundamentals of Momentum, Heat and Mass Transfer, by [James Welty](#), [Charles E. Wicks](#), [Gregory L. Rorrer](#), [Robert E. Wilson](#), Wiley; **6th Edition**, (January 8, 2014)



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Course Content

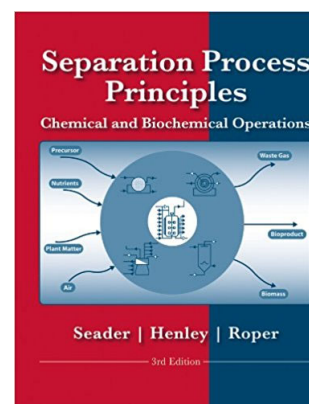


1	Fundamentals of Mass Transfer	CH 24
2	Differential Equations of Mass Transfer	CH 25
3	Steady-State Molecular Diffusion	CH 26
4	Unsteady-State Molecular Diffusion	CH 27
5	Convective Mass-Transfer	CH 28, 30
6	Convective Mass Transfer Between Phases	CH 29

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Separation Process Principles, by
**J. D. Seader, Ernest J. Henley, D.
Keith Roper, Wiley; 3rd edition
(November 23, 2010)**



7	Absorption and Stripping of Dilute Mixtures	CH 6
8	Distillation of Binary Mixtures	CH 7
1-6	Mass Transfer and Diffusion	CH 3

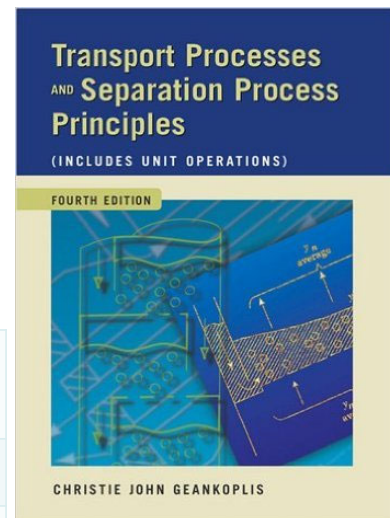
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Other References



Transport processes and separation process principles, by **Christie John Geankoplis**, 4th edition Prentice Hall; (March 15, 2003)



1	Principles of Mass Transfer: Diffusion	CH6
2	Convection Mass Transfer	CH 7
3	Distillation of Binary Mixtures	CH 11
4	Absorption and Stripping	CH 10

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Other References



- Wankat, P. C.; Separation Process Engineering, 2nd Ed., Prentice Hall
- Coulson, J.M.; and Richardson, J.F.; Chemical Engineering Volume 2, 5th Ed., 1999, Butterworth-Heinemann

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Class schedule: 3 credits



Time and place: Mon., Wed.: 8:00-9:30 at Al-Taher Hall-CHE

Office hours: Mon., Wed., 11:30 – 12:30, Thu., 9:30-10:30

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Grading



Midterm exam	30%
HW +Quizzes + short exam	30%
Final Exam (comprehensive)	40%

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Course Management



- **Attendance:** attendance of all classes is required. Maximum allowed excused absences is 4 during TW classes. A single excess absence will lead to permanent dismissal from the course. **NO excuse will Be accepted**
- **Make-ups:** no make up examinations, quizzes or late assignments will be accepted.
- **Communication:** Students can reach the instructor during office hours or by email. All materials related to our course will be uploaded to the instructor's website;
- <http://www2.ju.edu.jo/sites/Academic/z.hamamre/Material/Forms/AllItems.aspx>

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Always bring to class



- Plastic folder that contains:
- Calculator
- Pencil
- Eraser
- Drawing ruler and triangle
- Sheets and diagrams submitted in class.

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