



Satuan Acara Pengajaran

MAT30312 - Pemrograman Dinamik (OR)

Pengajar

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Minggu 1

Materi Pendahuluan
Shortest Path

Media

Referensi

Aktivitas Kuliah Interaktif
Diskusi Kelompok

Minggu 2

Materi Shortest path

Media

Referensi

Aktivitas Presentasi

Minggu 3

Materi Fungsi Rekursif
Fungsi Separable
Beberapa contoh sederhana Pemrograman Dinamik

Media

Referensi

Aktivitas Kuliah Interaktif
Diskusi Kelompok

Minggu 4

Materi Knapsack problem
Cargo loading model
Resources allocation problem
Distributing medical team problem
Optimal cutting stock problem
Work force size model

Media

Referensi

Aktivitas Presentasi

Minggu 5

Materi Kuis
Konsep pemrograman dinamik

Media

Referensi

Aktivitas Kuis
Diskusi Kelompok

Minggu 6

Materi Konsep pemrograman dinamik
Pemrograman dinamik status tunggal diskret

Media

Referensi

Aktivitas Presentasi
Diskusi Kelompok

Minggu 7

Materi Pemrograman dinamik status tunggal diskret:
- Equipment replacement
- Integer nonlinear programming
- Integer constrained problem

Media

Referensi

Aktivitas Diskusi Kelompok
Presentasi

Minggu 8

Materi Inventory Control Problem
Facilities Selection Problem
Review

Media

Referensi Cooper, Leon & Cooper, Mary W. Introduction to Dynamic Programming. Pergamon Press, 1981.
Ravindran, A., Phillips, Don T., & Solberg, James J. Operation Research: Principles and Practice. John Wiley & Sons, Inc, 1987.

Aktivitas Presentasi
Kuliah Interaktif

Minggu 9

Materi UTS

Media

Referensi

Aktivitas UTS

Minggu 10

Materi Pembahasan UTS
Pemrograman dinamik status tunggal kontinu
Pemrograman dinamik multi dimensi

Media

Referensi Cooper, Leon & Cooper, Mary W. Introduction to Dynamic Programming. Pergamon Press, 1981.
Hillier, Frederick S. & Lieberman, Gerald J. Introduction to Operations Research. McGraw-Hill, 1995.
Parlar, Mahmut. Interactive Operations Research with MAPLE: Methods and Models. Birkhauser, 2000.
Ravindran, A., Phillips, Don T., & Solberg, James J. Operation Research: Principles and Practice. John Wiley & Sons, Inc, 1987.
Winston, Wayne L. Introduction to Mathematical Programming: Applications and Algorithms. Duxbury Press, 1995.

Aktivitas Kuliah Interaktif
Diskusi Kelompok

Minggu 11

Materi Some variations of the prototype problem
A nonlinear allocation problem
Scheduling employment levels
Mutual fund investment strategies
Using SPREADSHEET and MAPLE to solve dynamic programming problems

Media

Referensi Cooper, Leon & Cooper, Mary W. Introduction to Dynamic Programming. Pergamon Press, 1981.
Hillier, Frederick S. & Lieberman, Gerald J. Introduction to Operations Research. McGraw-Hill, 1995.
Parlar, Mahmut. Interactive Operations Research with MAPLE: Methods and Models. Birkhauser, 2000.
Ravindran, A., Phillips, Don T., & Solberg, James J. Operation Research: Principles and Practice. John Wiley & Sons, Inc, 1987.
Winston, Wayne L. Introduction to Mathematical Programming: Applications and Algorithms. Duxbury Press, 1995.

Aktivitas Presentasi

Minggu 12

Materi Using MATLAB to solve dynamic programming problems
The curse of dimensionality
Pemrograman dinamik probabilistik
Travelling Salesman Problem
Lagrangian Multiplier

Media

Referensi Cooper, Leon & Cooper, Mary W. Introduction to Dynamic Programming. Pergamon Press, 1981.
Hillier, Frederick S. & Lieberman, Gerald J. Introduction to Operations Research. McGraw-Hill, 1995.
Taha, Hamdy A. Operations Research: An Introduction. Prentice-Hall, 1997.

Aktivitas Presentasi
Diskusi Kelompok

Minggu 13

Materi Pemrograman dinamik probabilistik
Travelling Salesman Problem
Lagrangian multiplier

Media

Referensi Cooper, Leon & Cooper, Mary W. Introduction to Dynamic Programming. Pergamon Press, 1981.
Hillier, Frederick S. & Lieberman, Gerald J. Introduction to Operations Research. McGraw-Hill, 1995.
Taha, Hamdy A. Operations Research: An Introduction. Prentice-Hall, 1997.

Aktivitas Presentasi

Minggu 14

Materi Markov processes
Markovian sequential decision process
Lagrangian multipliers to reduce state dimensionality

Media

Referensi Cooper, Leon & Cooper, Mary W. Introduction to Dynamic Programming. Pergamon Press, 1981.

Aktivitas Presentasi

Minggu 15

Materi Review

Media

Referensi

Aktivitas Kuliah Interaktif

Minggu 16

Materi UAS

Media

Referensi

Aktivitas UAS
