

VIETNAM NATIONAL UNIVERSITY, HO CHI MINH CITY
UNIVERSITY OF TECHNOLOGY
FACULTY OF COMPUTER SCIENCE AND ENGINEERING



MATHEMATICAL MODELING (CO2011)

Assignment (Semester: 231, Duration: 06 weeks)

"Stochastic Programming and Applications"

(Version 0.1, in Preparation)

Advisor: Nguyễn Tiến Thịnh, CSE-HCMUT

Trần Đình Đăng Khoa - 2211649

Trần Đặng Hiễn Long - 2252449

Students: Nguyễn Hồ Phi Ứng - 2252897

Nguyễn Hồ Đức An - 2252009

Vũ Minh Quân - 2212828

HO CHI MINH CITY, OCTOBER 2023



Contents

1	Member list & Workload	2
2	Introduction to Stochastic Programming and Optimization	2
2.1	Programming? What is Stochastic Programming? Uncertainty?	2
2.2	Basic concepts, assumptions - Motivation	2
2.3	Bonus exercises	2
3	Probabilty	2
3.1	Problem 1	2
3.2	Problem 2	2
3.3	Bonus exercises	2
4	Graph	3
4.1	Problem 1	3
4.2	Problem 2	3
4.3	Bonus exercises	3



1 Member list & Workload

No.	Fullname	Student ID	Problems	Percentage of work
1	Trần Đình Đăng Khoa	2211649	- Relation & Counting: 1, 2, 3 Bonus: 1, 2, 3. - Probability: 1, 2, 3.	30%
2	Trần Đăng Hiên Long	2252449	- Relation & Counting: 4, 5, 6 Bonus: 4, 5, 6. - Graph: 1, 2, 3, Bonus: 1, 2, 3.	20%
3	Nguyễn Hồ Phi Ứng	2252897	- Relation & Counting: 7, 8, 9 Bonus: 7, 8, 9. - Probability: 4, 5, 6.	20%
4	Nguyễn Hồ Đức An	2252009	- Relation & Counting: 10, 11, 12 Bonus: 10, 11, 12. - Graph: 4, 5, 6, Bonus: 4, 5, 6.	20%
5	Vũ Minh Quân	2212828	- Relation & Counting: 13, 14, 15 Bonus: 13, 14, 15. - Probability: 7, 8, 9.	10%

2 Introduction to Stochastic Programming and Optimization

2.1 Programming? What is Stochastic Programming? Uncertainty?

...

2.2 Basic concepts, assumptions - Motivation

...

2.3 Bonus exercises

...

3 Probabilty

3.1 Problem 1

...

3.2 Problem 2

...

3.3 Bonus exercises

...



4 Graph

4.1 Problem 1

...

4.2 Problem 2

...

4.3 Bonus exercises

...

References

[1] ...

[2] ...