

## **Syllabus for Material Flow Analysis and Its Applications (Spring Term of 2021-2022)**

### ***I. Basic information***

#### **Teaching Group:**

Associate Prof. Xianlai Zeng, [xlzeng@tsinghua.edu.cn](mailto:xlzeng@tsinghua.edu.cn)

Ms. Weirun Huang (teaching assistant), [hwr21@mails.tsinghua.edu.cn](mailto:hwr21@mails.tsinghua.edu.cn)

Other professors from international university will be invited in this course.

**Credit:** 2

**Course time:** Monday, 8:00-9:35

**Address:** Room 105, Teaching building 6A & Online

### ***II. Initial arrangement***

#### **Lectures:**

Week	Date	Content	
1	2.21	<b>1. Introduction to MFA</b> 1.1 Objectives and Scope 1.2 What are MFA and SFA? 1.3 History of MFA	LEC (Lecture)
2	2.28	1.4 Application of MFA 1.5 Objectives of MFA	LEC
3	3.7	<b>2. Framework Design of MFA</b> 2.1 MFA Terms and Their Definitions	LEC
4	3.14	2.2 MFA Design Procedures	LEC
5	3.21	2.3 Treatment of Data Uncertainties	LEC
6	3.28		
7	4.4	2.4 MFA with Software STAN	LEC
8	4.11	2.5 Evaluation Methods for MFA Results	LEC
9	4.18	<b>3. MFA Applications</b> 3.1 Environmental Management	CAS (Case)
10	4.25	3.2 Resource Conservation	CAS
11	5.2	3.3 Waste Management	CAS

12	5.9	3.4 Industrial Applications	CAS
13	5.16	3.5 Regional Materials Management	CAS
14	5.23	3.6 Typical Cases	SEM (Seminar)
15	5.30		
16	6.6	<b>Summarization</b>	LEC/COL (Colloquium)

**Assessment:**

- 1) Homework (40%);
- 2) Project and paper (50%);
- 3) Attendance (10%).