

# DESIGN OF FOOD EXTRUSION DIES

HES-SO, Sion Switzerland, 13 & 14 February August 2020

## DRAFT COURSE PROGRAM

Please note: The following program may be subject to change

### Day 1 Thursday, 13 February

8.30 am	Introduction
8.45 am	Basic Extrusion Principles
9.45 am	An Introduction to Rheology
<b>10.15 am</b>	<b>Morning Tea</b>
10.30 am	Understanding Viscoelasticity
11.15 am	Flow Dynamics within the Extruder Die
11.45 am	Basic Principles of Die Design
<b>12.30 pm</b>	<b>Lunch</b>
1.15 pm	Derivation of the Die Conductance Equation
2:00 pm	Classification of Dies
2.30 pm	<i>Tutorial # 1 and Tutorial # 2</i>
<b>3.15 pm</b>	<b>Afternoon Tea</b>
3.30 pm	The Entrance Correction
4.15 pm	<i>Tutorial # 3</i>
<b>4.45 pm</b>	<b>End of Day</b>

## **Day 2      Friday, 14 February**

<b>8.15 am</b>	Review and Questions from Day 1
8.30 am	Extrusion Die Capacity Models
9.15 am	Dies with Non-Uniform Geometry
<b>10.00 am</b>	<b>Morning Tea</b>
10.15 am	<i>Tutorial # 4</i>
11.00 am	Design of Primary Dies
11.45 am	<i>Tutorial # 5</i>
<b>12.15 am</b>	<b>Lunch</b>
1.00 pm	Die Plate Wear and Its Influence on Product Quality
1.45 pm	<i>Tutorial # 6</i>
2.15 pm	Die Design Procedure
<b>3.00 pm</b>	<b>Afternoon Tea</b>
3.15 pm	Use of Dimensional Analysis in Die Design
4.00 pm	Obtaining Rheological Data from Extruders
<b>4.30 pm</b>	<b>Close of Course</b>