

- Faculté des sciences économiques
- www.unine.ch/seco

## Asset pricing (5AF2003)

Filières concernées	Nombre d'heures	Validation	Crédits ECTS
<b>Master en finance</b>	<b>Cours: 4 ph</b>	<b>cont. continu</b>	6
<b>Master en statistique</b>	<b>Cours: 4 ph</b>	<b>cont. continu</b>	6

ph=période hebdomadaire, pg=période globale, j=jour, dj=demi-jour, h=heure, min=minute

### Période d'enseignement:

- Semestre Automne

### Equipe enseignante:

Professor Michel Dubois  
Institute of Financial Analysis  
Pierre-à-Mazel 7  
CH-2000 Neuchâtel  
Tel. +41 32 718 1366 Email: michel.dubois@unine.ch

### Objectifs:

The objective of the course is twofold. First, we examine consumption and saving under certainty. The basic model is extended under uncertainty and generalized to a multi-period framework. Second, we introduce the concept of pricing under the no arbitrage condition in discrete time.

### Contenu:

We will first discuss the optimal consumption and investment decisions in a one period model under uncertainty and risk aversion. This will lead us to the construction of a static equilibrium model of financial assets valuation: the Capital Asset Pricing Model (CAPM). We will then move on to arbitrage based valuation by introducing the concept of Arrow-Debreu securities and equivalent martingale measures. We will derive a general arbitrage based valuation methodology: the Arbitrage Pricing Theory (APT). Finally we will derive a dynamic equilibrium model: the Consumption-Cased Asset Pricing Model (C-CAPM). We will emphasize the link between the different approaches discussed in class and show that there are, in fact, different specifications of the same equation, namely a characterization of the stochastic discount factor.

### Forme de l'évaluation:

Continuous assessment:  
Mid-term exam 40%, final exam 60%.  
Re-take exam (August-September): 2-hour written exam 100%.

### Documentation:

Danthine J.P. and R. Donaldson, 2005, Intermediate Financial Theory, 2nd edition, Elsevier.  
Elton E., M. Gruber, S. Brown and W. Goetzmann, 2003, Modern Portfolio Theory and Investment Analysis, John Wiley & Sons.  
CFA textbooks (2013).

### Pré-requis:

None.

### Forme de l'enseignement:

Lectures: 4 hours per week.