### COURSE CONTENT

<table>
<thead>
<tr>
<th><strong>Course Coordinator</strong></th>
<th>Yohanes Eko Riyanto</th>
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<tbody>
<tr>
<td><strong>Course Code</strong></td>
<td>HE4004</td>
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<tr>
<td><strong>Course Title</strong></td>
<td>Behavioral Economics</td>
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<tr>
<td><strong>No of AUs</strong></td>
<td>4</td>
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<tr>
<td><strong>Contact Hours</strong></td>
<td>52 hours (4 hours Seminar per week)</td>
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**Course Aims**

The above figure depicts the Moller Franz illusion. The lengths of the three lateral lines above appear to be different, although they are of the same length. The cognitive function of our brain tricks us into thinking that they are different. Behavioral Economics studies how psychological limitations influence economic decision makings. In particular, it focuses on how adding important and more realistic human psychological attributes, which include:

1. **Bounded rationality**; Why people sometimes make seemingly irrational decisions such as taking more risks when they experience losses and being more risk-averse when they experience gains?

2. **Bounded willpower**; Why people often have difficulties in carrying out activities and actions that they had already earlier planned? For example, often, people desire to save more for retirement but unable to commit to doing so because they face the temptation to spend their money now.

3. **Bounded self-interest**; Why are people not entirely selfish as assumed in the standard economics analysis? They often are willing to sacrifice their monetary payoffs to uphold fairness and (or) to help unfortunate others. Thus, economics agents are not solely motivated by individual utility maximization.

All these attributes can have profound impacts on the predictions of the standard economic models and the way we craft economic and social policies.
Intended Learning Outcomes (ILO)
By the end of this course, you (as a student) would be able to:

1. Describe how psychological limitations (e.g., limited cognition, bounded rationality, limited attention, mental states, etc.) influence economic decision makings.
2. provide a holistic account of how Behavioral Economics situates within the universe of the Economics discipline.
3. Apply insights from Behavioral Economics to hypothesize the relative impact of various public policies.
4. work in a small group team to propose carefully thought Behavioral Economics based policies aimed at addressing significant social and (or) economic issues.
5. Present the above-proposed policies and defend their feasibility with solid scientifically-backed arguments.

Course Content
- Introduction to Behavioral Economics
- Prospect Theory, Reference-Dependent Preferences, Endowment Effect, and Loss Aversion
- Heuristics and Biases: Representativeness, Availability, and Anchoring
- Framing, Mental Accounting, Reversal of Preference and Money Illusion
- Present-Biased Preferences and Intertemporal Choice
- Behavioral Game Theory I: Dictator Game, Ultimatum Game, Trust Game, Prisoner’s Dilemma, and Public Good Game
- Fairness and Social Preferences
- Behavioral Game Theory II: Mixed Strategies, Iterated and Dominance Solvable Games, Learning

Assessment (includes both continuous and summative assessment)
1. Class Participation : 10%
2. 1st Group Project : 20%
3. The ‘Nudge’ Project : 20%
4. Final Exam : 50%
Total : 100%

Reading and References
The Materials
I will add more materials and readings from recent journal articles, and whenever possible, some real-examples of applications as the course progresses. This syllabus is meant only for guidelines; the actual contents may change as the course progresses. The reading-materials listed here are the limitations readings only, in the lecture notes I include many more materials from other sources.

Use the lecture notes as the main point of entry when studying for the course, and I encourage you to go search for the readings and other relevant materials yourself to enrich your knowledge and to understand the materials better. A pro-active strategy is recommended. Remember that …”
truth has four corners: as a teacher, I give you one corner, and it is for you to find the other three. (Confucius)"

There are two recent books I would like to recommend you to read actively. They would also be excellent reference books you might want to have for your own personal library.

1. Daniel Kahneman (Princeton University), one of the founding fathers of behavioral economics, “Thinking Fast and Slow.” He won the Nobel Prize in Economics in 2002, together with Vernon Smith, the ‘father’ of Experimental Economics.

![Thinking Fast and Slow](image1.jpg)

2. Richard Thaler (University of Chicago), Misbehaving: The Making of Behavioral Economics. Richard Thaler is responsible for introducing Behavioral Economics to the policy-making, and he was awarded the Nobel Prize in Economic Sciences in 2017.

![Misbehaving: The Making of Behavioral Economics](image2.jpg)

Additional Readings

1. Introduction to Behavioral Economics

2. Prospect Theory, Reference-Dependent Preferences, Endowment Effect, and Loss Aversion


3. Heuristics and Biases: Representativeness, Availability, and Anchoring


4. Framing, Mental Accounting, Reversal of Preference and Money Illusion

5. Present-Biased Preferences and Intertemporal Choice


6. Fairness and Social Preferences

- Camerer, Colin (2003), Behavioral Game Theory, New Jersey: Princeton University Press (Chapters 1&2)

7. Behavioral Game Theory: Mixed Strategies, Iterated and Dominance Solvable Games, Learning


Course Instructors

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<tr>
<th>Instructor</th>
<th>Office Location</th>
<th>Phone</th>
<th>Email</th>
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<tbody>
<tr>
<td>Yohanes Eko Riyanto</td>
<td>SHHK 05-56E</td>
<td>65921578 / 69047276</td>
<td><a href="mailto:yeriyanto@ntu.edu.sg">yeriyanto@ntu.edu.sg</a></td>
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### Planned Weekly Schedule

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
<th>Course LO</th>
<th>Readings/ Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Introduction to Behavioral Economics</td>
<td>1,2</td>
<td>Lecture notes/ slides and additional readings on the topic of “Introduction to Behavioral Economics.”</td>
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<tr>
<td>2</td>
<td>Introduction to Behavioral Economics</td>
<td>1,2</td>
<td>Lecture notes/ slides and additional readings on the topic of “Introduction to Behavioral Economics.”</td>
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<tr>
<td>3</td>
<td>Prospect Theory and Reference Dependent Preferences: Basic Theories</td>
<td>3,4,5</td>
<td>Lecture notes/ slides will be provided, and additional readings on the topic of “Prospect Theory, Reference-Dependent Preferences, Endowment Effect, and Loss Aversion.”</td>
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<tr>
<td>4</td>
<td>Prospect Theory and Reference Dependent Preferences: Some Examples of Applications</td>
<td>3,4,5</td>
<td>Lecture notes/ slides and additional readings on the topic of “Prospect Theory, Reference-Dependent Preferences, Endowment Effect, and Loss Aversion.”</td>
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<tr>
<td>5</td>
<td>Heuristics and Biases I</td>
<td>3,4,5</td>
<td>Lecture notes/ slides and additional readings on the topic of “Heuristics and Biases: Representativeness, Availability, and Anchoring.”</td>
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<tr>
<td>6</td>
<td>Heuristics and Biases II</td>
<td>3,4,5</td>
<td>Lecture notes/ slides and additional readings on the topic of “Heuristics and Biases: Representativeness, Availability, and Anchoring.”</td>
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<td>7</td>
<td>Mental Accounting and Money Illusion</td>
<td>3,4,5</td>
<td>Lecture notes/ slides and additional readings on the topic of “Framing, Mental Accounting, Reversal of Preference and Money Illusion.”</td>
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<tr>
<td>Week</td>
<td>Topic</td>
<td>Lectures</td>
<td>Additional Information</td>
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<td>8</td>
<td>Intertemporal Preferences, Present-Biased Preferences, and Hyperbolic Discounting: Basic Theories</td>
<td>3,4,5</td>
<td>Lecture notes/ slides and additional readings on the topic of “Present-Biased Preferences and Intertemporal Choice.”</td>
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<tr>
<td>9</td>
<td>Intertemporal Preferences, Present-Biased Preferences, and Hyperbolic Discounting: Applications</td>
<td>3,4,5</td>
<td>Lecture notes/ slides and additional readings on the topic of “Present-Biased Preferences and Intertemporal Choice.”</td>
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<td>10</td>
<td>Fairness and Social Preferences</td>
<td>3,4,5</td>
<td>Lecture notes/ slides and additional readings on the topic of “Fairness and Social Preferences.”</td>
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<tr>
<td>11</td>
<td>Behavioral Game Theory</td>
<td>3,4,5</td>
<td>Lecture notes/ slides and additional readings on the topic of “Behavioral Game Theory: Mixed Strategies, Iterated and Dominance Solvable Games, Learning.”</td>
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<tr>
<td>12</td>
<td>Project 1 Presentation</td>
<td>4,5</td>
<td>Group presentations</td>
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<tr>
<td>13</td>
<td>The Nudge Project Presentation</td>
<td>4,5</td>
<td>Group presentations</td>
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