

SYLLABUS

of the International Economics Olympiad



INTERNATIONAL
ECONOMICS OLYMPIAD

1. GENERAL

1.1. Although the teaching of economics and similar subjects is very different worldwide, the tasks of the IEO will be composed in a way that facilitates equal competition. The tasks will not be aimed primarily at testing the knowledge of theory. A significant share of the tasks will be practical-oriented, test analytical skills and curiosity.

1.2. Economics and Finance parts of the competition are individual and closed-book. A contestant may use a simple (non-programmable) pocket calculator and a dictionary for translating words. The dictionary must be clean – without any notes or extra sheets of paper in it. Smartphones and other devices are prohibited.

1.3. In accordance with the Statute of the IEO, all tasks will be provided only in English. Contestants must provide their solutions in English.

1.4. In every part of the competition, the result is first computed in raw points. Raw points are then normalised to get the final points according to the following procedure.

1.4.1. Let G_i be the raw score of the contestant (or team in Part 3) i in the part of the Olympiad, A – the average of all raw scores, σ – standard deviation of all raw scores. Then we define Z-score of the contestant i as:

$$Z_i = G_i - A$$

1.4.2. The final result of the contestant i is then calculated as follows:

$$F_i = \frac{M}{2} \left\{ \left\{ 1 + \frac{Z_i}{2}; 0 \right\}; 2 \right\}$$

Where M is the maximum possible result of this part (in final points) specified in this Syllabus.

1.4.3. If some scores change in the process of moderation, Z-scores and final scores are recalculated.

1.4.4. The maximum individual final points for the parts of the competition (variable M) are the following: 100 for Economics section, 50 for Financial Literacy section, 50 for Business (Case Study) section. The individual points for the Business (Case Study) part equal the team points for the part.

1.4.5. The total individual results are calculated as a sum of all three final scores. Ties are broken by taking the score from the Economics part. If still tied, the Finance section results are taken.

1.4.6. The total team results are calculated as a sum of:

- the average final score of team members in the Economics section divided by 2;
- the average final score of team members in the Finance section;
- the team score in Business (Case Study) section.

Ties are broken by taking the average team score from the Economics part. If still tied, the Business (Case Study) section results are taken.

1.4.7. The final scores of separate parts are not to be published prior to the Closing Ceremony.

2. ECONOMICS

2.1. The tasks in Economics (the first part of the competition) should test contestants' understanding of basic economic concepts and models, their curiosity about the field and analytical skills. This section of the competition is individual.

2.2. The main recommended textbook for the Economics section is The Economy by the CORE Economics Education project. CORE (which stands for Curriculum Open-access Resources in Economics) offers a modern way of teaching economics that is widely accessible for students with any backgrounds and available online at <http://www.core-econ.org> (free of charge).

2.3. Supplementary recommended textbook for preparation is Principles of Economics by N. Gregory Mankiw (the newest edition). It represents the more traditional approach to teaching introductory economics. These two textbooks are available in English, Mankiw's textbook is also translated into other languages, CORE Textbook is also available in French. If these resources are unavailable for contestants, they can use other economics textbooks of principles level.

2.4. Economics section of the IEO includes 20 multiple choice questions and 5 open questions; the overall time limit is 235 minutes. In an online/hybrid format of the olympiad, the overall time is to be divided in two parts: one for MCQ and one for OQ, with a break between those parts. The decision on lengths of those parts and a break is to be taken by the Problem Committee and Steering Committee of the respective IEO. Multiple choice questions test the basic understanding of economic concepts (which may include simple calculations). Each of the 5 open questions will be stated either quantitatively (include calculations) or qualitatively (include extensive explanations) or both.

2.5. In every paper, all 20 multiple choice questions will be graded (4 raw points for the correct answer, minus 1 raw point for the incorrect answer). 5 open questions will represent different topics of economics; the contestant must explicitly choose 4 of them to be graded in their paper. The maximum grade for each open question is 30 raw points. If a contestant provides solutions for all 5 open questions, all of them will be commented on by the Jury, but only 4 will add to the contestant's score. If in this case a contestant has failed to specify solutions to be graded, the maximum grade of 5 answers will be excluded.

2.6. Each open question and multiple-choice question must belong to one or more of the following topics:

- Specialization and the gains from trade;
- Technology and long-run growth;
- Game theory: conflict and cooperation;
- Institutions;
- Firms;
- Competitive markets for goods and services (including government interventions and non-clearing markets);
- Labour market;
- Market failures;
- Macroeconomic data: measuring income, inflation and unemployment;
- Money;
- Fluctuations and macroeconomic policy;
- Open economy;
- Inequality;
- Environment;
- New industries and markets: innovations and networks.
- The problems and multiple-choice questions should be diverse in topics.



3.FINANCIAL LITERACY

3.1. Contestants will compete in creating a Personal financial plan. It will be an imitation contest about the real financial world. Contestants will deal with various financial instruments and institutions, economic processes, crisis situations and imitations of life circumstances. They will have to choose useful financial instruments that should work for the protection and multiplication of the game capital. The game process will require participants to plan, make decisions, think critically, evaluate the profitability of their investments, and to achieve the goal set. Financial model used in the competition will be universal, thus, no specialized knowledge of the economy of any particular country is required. Every contestant will be working for his or her individual result.

3.2. The full Financial Literacy Game description can be found on the IEO website: https://files.ecolymp.org/IEO_FLG_Description.pdf. The relevant information on the game is to be published by this link no later than 3 months prior to the IEO.

3.2. This part is designed to evaluate contestant's understanding of the following concepts and themes, related to personal finance:

- Income and expenses management
 - Fixed cost (taxes, loans, education, basic needs)
 - Variable cost
 - Spending
 - Basic Accounting
- Investment
 - General knowledge of investment instruments and their use
 - Investment planning
 - Funds
 - Retirement savings
 - Compound interest
 - Return rates and risk-return analysis
 - Ability to recognise fraud
 - Insurance
 - Own business with simple calculations
 - Taxes
 - Fundraising
 - Business plan calculation
 - Risk management
- Credit
 - Interest payments and calculation, cost-benefit analysis
 - Types of payments (annuity, differentiated)
 - Debt management

3.3. The raw results of the Financial Literacy part are counted by applying log transformation to the points received in the game.

3.4. Participating in this section of the IEO requires basic knowledge of financial concepts. Some of them can be found at:

<http://www.practicalmoneyskills.com/learn>

<https://www.pwc.com/us/en/about-us/corporate-responsibility/access-your-potential/financial-literacy-curriculum.html>

<https://bettermoneyhabits.bankofamerica.com/en>

<http://www.citigroup.com/citi/citizen/community/curriculum/teens.htm>



4. BUSINESS (CASE STUDY)

4.1. The competition in business is a team competition and includes the oral presentation of the results. Presentations must be supported by slides. The presentations should be in English.

4.2. Case study part is a team competition and lasts for two days – 1) day of preparation; 2) day of the presentation. During the day of preparation, contestants may use any online and offline materials, but it is prohibited to contact other people for help. All teams submit their slides by 23:59 local time of the preparation day. No changes to slides are allowed after this time.

4.3. On the day of presentation, teams are divided into groups. Each group is assigned a separate panel of judges.

4.4. One top team from each group is invited to the public Business Case Finals. In the Finals, teams are to present their solution again and be graded by a panel of judges.

4.5. Raw scores for the Business Case part are counted as a sum of scores for each criterion. Score for each criterion is the median of scores for this criterion given by each judge of the panel. The final result of a team participating in the Business Case Finals is the maximum of two results: in a group stage and in Finals.

4.6. Business case solution consists of several parts. Here are the competencies contestant should acquire, that will be evaluated by the jury, related to those parts:

Analytical thinking: the ability to structurally approach the solution of a complex business problem, correctly dividing it into streams (into directions within which the solution of the problem may lie).

As a rule, the team should divide the case into some large blocks, which, in turn, are further divided and so on to the level of specific problems. A good structure corresponds to the MECE principle (mutually exclusive, collectively exhaustive), that is, it covers all possible solutions, but each individual stream does not intersect with others.

Conceptual thinking: the ability to build correct hypotheses based on the resulting structure, made by analysis. Here the team checks how ideas respond to the necessary request and correctly address these or other problems of the enterprise, the team also makes sure that these solutions are feasible and have a common and business sense.

Quantitative thinking: no case can be solved without simple but fast calculations and more complex models that illustrate certain analyzes.

Communication skills: the ability to correctly build a presentation and to answer questions.

4.7. The PC recommends the following literature.

Useful literature for **case solving**:

The Pyramid Principle, Barbara Minto

Crack the Case, David Ohrvall

The Trusted Advisor, D. Maister, C. Green, R. Galford

Useful literature for **data analysis**:

The McKinsey Way, Ethan Rasiel

Strategic Management, Thompson Strickland

The Fifth Discipline, Peter Senge

Thinking Fast and Slow, Daniel Kahneman

Case in Point, Marc Cosentino

BCG on Strategy, C. Stern, M. Deimler

Useful literature for **presentations**:

Say It With Charts, Gene Zelazny



Unfolding the Napkin, Dan Roam
Visualize This, Nathan Yau
The Pyramid Principle, Barbara Minto
Slideology, Nancy Duarte

4.8. In addition to books listed above, the PC recommends studying the example cases that were used at the previous Olympiads and can be found here: <https://ecolymp.org/prepare>. Additional materials for preparation will be provided to the invited teams before the Business Case part.

5. MODERATION

5.1. The moderation process regulations are written in clause 4.3 of the IEO Statute.

5.2. The moderation is a time-limited process when a representative of the team can discuss the marks set in accordance with the publicly available grading parameters. This means that by the grading parameters there are strict rules on what mark should be set according to the text of the contestant's solution. Proposed solutions and the grading parameters are given to the team leaders to prepare for this process in advance. The discussion on moderation can be performed in any form, but the comparison of solutions to the grading parameters is advised to be prepared in advance.

Thus, to help the Jury find the works of the contestants and to be able to reevaluate the marks given, we recommend to prepare the following information in advance:

- The contestant's name;
- Tasks, numbers of tasks to be reviewed;
- Grading parameters;
- Contestant's solution with the parts of the solution that were not evaluated in accordance with those parameters underlined.

