



International Labour Organization
Organisation internationale du Travail
Organización Internacional del Trabajo

*Updating the
International Standard Classification of Occupations (ISCO)*

*Draft ISCO-08 Group Definitions:
Occupations in Mathematical*

POLICY INTEGRATION DEPARTMENT
BUREAU OF STATISTICS

3/19/2008

ISCO-08 Draft Definitions - Mathematical

Minor group 212

Title EN

Mathematicians, actuaries and statisticians

Lead Statement

Mathematicians, actuaries and statisticians conduct research, improve or develop mathematical, actuarial and statistical concepts, theories and operational models and techniques and apply this knowledge to a wide range of tasks in such fields as engineering, business and social and other sciences.

Task statement

Tasks performed usually include: conducting research in fundamental mathematics and advising on or applying mathematical, actuarial and statistical principles and techniques; dealing with, and advising on, actuarial matters, including design of insurance and pension schemes; planning, designing and conducting statistical collections; evaluating, organizing, processing, interpreting and analyzing statistical data; preparing scientific papers and reports.

Formatted: Font: 11 pt,
Complex Script Font: 11 pt

Included occupations

Occupations in this minor group are classified into the following unit group:
2120 - Mathematicians, actuaries and statisticians

Excluded occupations

Notes

Unit group 2120

Title EN

Mathematicians, actuaries and statisticians

Lead Statement

Mathematicians, actuaries and statisticians conduct research and improve or develop mathematical, actuarial and statistical concepts, theories and operational methods and techniques and advise on or engage in their practical application in such fields as engineering, business and social and other sciences.

Task statement

Tasks include:

- (a) studying, improving and developing mathematical, actuarial and statistical theories and techniques;
- (b) advising on or applying mathematical principles, models and techniques to a wide range of tasks in the fields of engineering, natural, social or life sciences;
- (c) conducting logical analyses of management problems, especially in terms of input-output effectiveness, and formulating mathematical models of each problem usually for programming and solution by computer;
- (d) designing and putting into operation pension schemes and life, health, social and other types of insurance systems;
- (e) applying mathematics, statistics, probability and risk theory to assess potential financial impacts of future events;
- (f) planning and organizing surveys and other statistical collections, and designing questionnaires;
- (g) evaluating, processing, analyzing, and interpreting statistical data and preparing them for publication;
- (h) advising on or applying various data collection methods and statistical methods and techniques, and determining reliability of findings, especially in such fields as business or medicine as well as in other areas of natural, social or life sciences;
- (i) preparing scientific papers and reports;
- (j) supervising the work of mathematical, actuarial and statistical assistants and statistical clerks.

Included occupations

Examples of the occupations classified here:

- Actuary
- Analyst, operations research
- Demographer
- Mathematician, applied mathematics
- Mathematician, pure mathematics
- Statistician
- Statistician, applied statistics
- Statistician, mathematical

Excluded occupations

Some related occupations classified elsewhere:

- Actuarial Assistant - 3314
- Mathematical Assistant - 3314
- Statistical Assistant - 3313
- Actuarial Clerk - 4312
- Statistical Clerk - 4312
- Information systems analyst - 2511

Formatted: Font: 11 pt,
Complex Script Font: 11 pt

Formatted: Font: 11 pt,
Complex Script Font: 11 pt

Formatted: Font: 11 pt,
Complex Script Font: 11 pt

Formatted: Font: 11 pt,
Complex Script Font: 11 pt

Formatted: Font: 11 pt,
Complex Script Font: 11 pt

Formatted: Font: 11 pt,
Complex Script Font: 11 pt

Notes

3/19/2008

Unit group 3314**Title EN****Statistical, mathematical and actuarial associate professionals****Lead Statement**

Statistical, mathematical and actuarial associate professionals assist in planning the collection, processing and presentation of statistical, mathematical or actuarial data and in carrying out these operations, usually working under the guidance of statisticians, mathematicians and actuaries.

Task statement

Tasks include:

- (a) assisting in planning and performing statistical, mathematical, actuarial, accounting and related calculations;
- (b) preparing detailed estimates of quantities and costs of materials and labour required for statistical census and survey operations;
- (c) performing technical tasks connected with establishing, maintaining and using registers and sampling frames for census and survey operations;
- (d) performing technical tasks connected with data collection and quality control operations in censuses and surveys;
- (e) using standard computer software packages to perform mathematical, actuarial statistical accounting and related calculations;
- (f) preparing statistical, mathematical, actuarial, accounting and other results for presentation in graphical or tabular form;
- (g) applying knowledge of statistical, mathematical, actuarial, accounting and related principles and practices in order to identify and solve problems arising in the course of their work;
- (h) supervising the work of statistical clerks.

Included occupations

Examples of the occupations classified here:

- Assistant, accounting
- Assistant, actuarial
- Assistant, mathematical
- Assistant, statistical

Excluded occupations

Some related occupations classified elsewhere:

- Actuary - 2120
- Statistical Clerk, - 4312
- Mathematician - 2120
- Statistician - 2120

Notes