

# INTRODUCTION TO EDITION 2001 OF THE NATIONAL OCCUPATIONAL CLASSIFICATION (NOC)

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## Introduction to Edition 2001 of the National Occupational Classification (NOC)

### Background

The National Occupational Classification (NOC) is the nationally accepted taxonomy and organizational framework of occupations in the Canadian labour market. It is based on extensive occupational research, analysis and consultation conducted across the country. In the decade since its development the labour market has undergone significant changes. Technological advancement, globalization of the economy and the increasing importance of knowledge in many occupations have all contributed to occupational change. This change has been studied and reflected in a revised edition of the *National Occupational Classification – NOC 2001*.

The NOC is used to compile, analyze and communicate information about occupations. Occupational information is of critical importance for the provision of labour market and career intelligence, skill development, occupational forecasting, labour supply and demand analysis, employment equity and numerous other programs and services. It provides a standardized framework for organizing the world of work in a manageable, understandable and coherent system and has been successfully implemented in a number of major applications over the past decade.

The 2001 edition of the NOC replaces the original publication and the parallel 1991 Standard Occupational Classification (SOC) produced by Statistics Canada. The revised SOC is now entitled the *National Occupational Classification for Statistics (NOC-S)*. NOC 2001 and the NOC-S fill the gaps that have been identified as shortcomings of the NOC system. These include a missing technical level for information technology occupations, inconsistencies in relation to the statistical structure and the challenges in capturing the emergence of new ways of working and new titles used in the labour market. NOC 2001, while conservative with respect to structural change, reflects the

evolution occupations have undergone over the past decade.

### Organizational Framework of NOC 2001

The NOC is a three-tiered hierarchical arrangement of occupational groups with successive levels of disaggregation.

#### **26 Major Groups**

- Each major group has a unique two-digit code number and is composed of one or more minor groups.

#### **140 Minor Groups**

- Each minor group has a unique three-digit code number and is composed of one or more unit groups. The first two digits of this code indicate the major group to which the minor group belongs.

#### **520 Unit Groups**

- Each unit group has a unique four-digit code. The first three digits of this code indicate the major and minor groups to which the unit group belongs.

A number of occupational titles are classified within each unit group. All occupational titles classified in the same unit group share the same four-digit unit group code. The title or label of the unit group represents the overall contents of the group.

The NOC revision process also included the revision of the NOC *Index of Titles*. Please refer to the introduction in the *Index of Titles* for details related to this terminological research project.

There are over 35,000 occupational titles included in the revised NOC system. Some titles are clearly occupations, such as *librarian* and *chef*, while others reflect specializations

within an occupational area, such as *music librarian* and *pastry chef*. Still others represent a range of jobs, such as *furniture assembler* and *sawmill machine operator*.

These titles are used to describe the work performed by many individuals holding similar jobs within an occupational area. The list of titles in the NOC is not meant to be exhaustive, but attempts to cover the most

commonly used and universally understood labels that identify work in the labour market.

### The Structural Changes in NOC 2001

A program of research and consultation was carried out for the purposes of this revision exercise. The following table outlines the types of structural changes that have resulted from the revision initiative.

## Minor Group Structural Changes

New Minor Groups	
217 Computer and Information Systems Professionals	<b>New</b> – Information technology minor group at the professional skill level.
228 Technical Occupations in Computer and Information Systems	<b>New</b> – Information technology minor group at the technical skill level.

Modified or Deleted Minor Groups	
216 Mathematicians, Statisticians and Actuaries	<b>Modified</b> – Information technology occupations moved to new minor group at professional level.
341 Assisting Occupations in Support of Health Services	<b>Modified</b> – Occupations from former minor group 663 are now included here.
644 Tour and Recreational Guides and Casino Occupations	<b>Modified</b> – Amusement attraction operator occupations moved to minor group 667. – Casino occupations remain here.
<del>663</del> Elemental Medical and Hospital Assistants	<b>Deleted</b> – Occupations now included in minor group 341.
667 Other Occupations in Travel, Accommodation, Amusement and Recreation	<b>Modified</b> – Amusement attraction operator occupations from minor group 644 are now included here.

### Unit Group Structural Changes

<b>New Unit Groups</b>	
2171 Information Systems Analysts and Consultants	<b>New</b> – Information technology group includes some occupations that were classified in former unit group 2162, Computer Systems Analysts.
2172 Database Analysts and Data Administrators	<b>New</b> – Information technology group at the professional skill level.
2173 Software Engineers	<b>New</b> – Includes some occupations that were classified in unit group 2147, Computer Engineers.
2174 Computer Programmers and Interactive Media Developers	<b>New</b> – Includes some occupations that were classified in former unit group 2163, Computer Programmers.
2175 Web Designers and Developers	<b>New</b> – Information technology group at the professional skill level.
2281 Computer and Network Operators and Web Technicians	<b>New</b> – Information technology group at the technical skill level that includes occupations classified in former unit group 1421, Computer Operators.
2282 User Support Technicians	<b>New</b> – Information technology group at the technical skill level.
2283 Systems Testing Technicians	<b>New</b> – Information technology group at the technical skill level.

<b>Modified or Deleted Unit Groups</b>	
0721 Facility Operation and Maintenance Managers	<b>Modified</b> – Now includes occupations from former unit group 0722.
<del>0722</del> Maintenance Managers	<b>Deleted</b> – Occupations now included in unit group 0721.
1411 General Office Clerks	<b>Modified</b> – Now includes occupations from former unit group 1412.

<del>1412</del> Typists and Word Processing Operators	<b>Deleted</b> – Occupations now included in unit group 1411.
<del>1421</del> Computer Operators	<b>Deleted</b> – Occupations now included in new information technology unit group 2281.
<del>2162</del> Computer Systems Analysts	<b>Deleted</b> – Occupations now included in new minor group 217 for information technology occupations at the professional level.
<del>2163</del> Computer Programmers	<b>Deleted</b> – Occupations now included in minor group 217.
3223 Dental Technologists, Technicians and Laboratory Bench Workers	<b>Modified</b> – Now includes occupations from former unit group 3412. Was 3220 for statistical purposes.
<del>3412</del> Dental Laboratory Bench Workers	<b>Deleted</b> – Occupations now included in unit group 3223. Was 3220 for statistical purposes.
3414 Other Assisting Occupations in Support of Health Services	<b>Modified</b> – Now includes occupations from former unit group 6631.
4214 Early Childhood Educators and Assistants	<b>Modified</b> – Now includes occupations from former unit group 6473. Was 6470 for statistical purposes.
6443 Casino Occupations	<b>Modified</b> – Amusement attraction operators, formerly part of this group, now included in unit group 6671.
<del>6473</del> Early Childhood Educator Assistants	<b>Deleted</b> – Occupations now included in unit group 4214.
<del>6631</del> Elemental Medical and Hospital Assistants	<b>Deleted</b> – Occupations now included in unit group 3414.
6641 Food Counter Attendants, Kitchen Helpers and Related Occupations	<b>Modified</b> – Now includes occupations from former unit group 6642.
<del>6642</del> Kitchen and Food Service Helpers	<b>Deleted</b> – Occupations now included in unit group 6641.
6671 Operators and Attendants in Amusement, Recreation and Sport	<b>Modified</b> – Amusement attraction operators, formerly from unit group 6443, now included here. Was 6670 for statistical purposes.

7265 Welders and Related Machine Operators	<b>Modified</b> – Now includes occupations from former unit group 9515. Was 9510 for statistical purposes.
<del>9515</del> Welding, Brazing and Soldering Machine Operators	<b>Deleted</b> – Occupations now included in unit group 7265.

<b>Changes to Formerly Aggregated Unit Groups for Statistics</b>	
0210 Engineering, Science and Architecture Managers	<b>Deleted</b> – Unit groups 0211, Engineering Managers, and 0212, Architecture and Science Managers, now disaggregated for statistical purposes.
0720 Facility Operation and Maintenance Managers	<b>Deleted</b> – Replaced by 0721, Facility Operation and Maintenance Managers.
2230 Civil Engineering Technologists and Technicians and Construction Estimators	<b>Deleted</b> – Unit groups 2231, Civil Engineers, and 2234, Construction Estimators, now disaggregated for statistical purposes.
3220 Dental Technicians and Laboratory Bench Workers	<b>Deleted</b> – Replaced by 3223, Dental Technologists, Technicians and Laboratory Bench Workers.
4160 Health and Social Policy Researchers, Consultants and Program Officers	<b>Deleted</b> – Unit groups 4164, Social Policy Researchers, Consultants and Program Officers, and 4165, Health Policy Researchers, Consultants and Program Officers, now disaggregated for statistical purposes.
6470 Early Childhood Educators and Assistants	<b>Deleted</b> – Replaced by 4214, Early Childhood Educators and Assistants.
6670 Amusement Attraction Operators and Other Amusement Occupations	<b>Deleted</b> – Replaced by 6671, Operators and Attendants in Amusement, Recreation and Sport.
9510 Welders and Soldering Machine Operators	<b>Deleted</b> – Replaced by 7265, Welders and Related Machine Operators.

## NOC Classification Criteria

The two major attributes of jobs used as classification criteria in developing the NOC are *skill level* and *skill type*. Other factors, such as industry and occupational mobility, are also taken into consideration.

### *Skill Level*

Skill level is defined generally as the amount and type of education and training required to enter and perform the duties of an occupation. In determining skill level, the experience required for entry, and the complexity and responsibilities typical of an occupation are also considered in relation to other occupations.

Four skill level categories are identified in the NOC. Each minor and unit group is assigned to one of the skill levels.

The skill level categories are broad aggregates, reflecting four commonly accepted educational, training or preparatory routes for entering employment. Requirements for individual unit groups or occupations may overlap between the boundaries of the skill levels. For example, some occupations can be entered with either a university degree or a college diploma. When the entry requirements for a unit group or occupation reflect a range of possible educational and training specifications, skill level placement of the group was determined by considering several factors. These include the requirements most generally demanded by employers, the minor group context, complexity of overall

responsibilities and knowledge requirements as well as further training and specialization acquired on the job.

The classification describes the educational and training requirements for *occupations*. However, the education and experience of particular job incumbents may not correspond exactly to the level described. Individuals may be over-qualified for their work or they may work in occupations for which the entry requirements have changed after they became employed.

It is important to note that the skill level categories are not intended to designate socio-economic status or prestige. Rather they are intended to reflect actual occupational entry requirements. These requirements are expressed in terms of the formal educational system and other types of training specified by employers.

Management occupations are not assigned to a skill level category. These occupations span the entire classification structure and are found in all sectors or areas of the labour market. Factors other than education and training (e.g., previous experience, ownership of real property and capital, ownership of intellectual property, inherent decision-making skills and organizational capabilities) are often more significant determinants for employment in management occupations.

The skill level categories of the NOC are outlined and defined in the chart that follows.

<b>NOC SKILL LEVEL CRITERIA</b>			
<b>EDUCATION/TRAINING</b>	<b>OTHER</b>		
<b>SKILL LEVEL A</b>	<ul style="list-style-type: none"> <li>• University degree (bachelor's, master's or doctorate)</li> </ul>		
<b>SKILL LEVEL B</b>	<table border="0" style="width: 100%;"> <tr> <td style="vertical-align: top; width: 50%;"> <ul style="list-style-type: none"> <li>• Two to three years of post-secondary education at community college, institute of technology or CÉGEP <i>or</i></li> <li>• Two to five years of apprenticeship training <i>or</i></li> <li>• Three to four years of secondary school and more than two years of on-the-job training, occupation-specific training courses or specific work experience</li> </ul> </td> <td style="vertical-align: top; width: 50%;"> <ul style="list-style-type: none"> <li>• Occupations with supervisory responsibilities are also assigned to skill level B.</li> <li>• Occupations with significant health and safety responsibilities (e.g., fire fighters, police officers and licensed practical nurses) are assigned to skill level B.</li> </ul> </td> </tr> </table>	<ul style="list-style-type: none"> <li>• Two to three years of post-secondary education at community college, institute of technology or CÉGEP <i>or</i></li> <li>• Two to five years of apprenticeship training <i>or</i></li> <li>• Three to four years of secondary school and more than two years of on-the-job training, occupation-specific training courses or specific work experience</li> </ul>	<ul style="list-style-type: none"> <li>• Occupations with supervisory responsibilities are also assigned to skill level B.</li> <li>• Occupations with significant health and safety responsibilities (e.g., fire fighters, police officers and licensed practical nurses) are assigned to skill level B.</li> </ul>
<ul style="list-style-type: none"> <li>• Two to three years of post-secondary education at community college, institute of technology or CÉGEP <i>or</i></li> <li>• Two to five years of apprenticeship training <i>or</i></li> <li>• Three to four years of secondary school and more than two years of on-the-job training, occupation-specific training courses or specific work experience</li> </ul>	<ul style="list-style-type: none"> <li>• Occupations with supervisory responsibilities are also assigned to skill level B.</li> <li>• Occupations with significant health and safety responsibilities (e.g., fire fighters, police officers and licensed practical nurses) are assigned to skill level B.</li> </ul>		
<b>SKILL LEVEL C</b>	<ul style="list-style-type: none"> <li>• One to four years of secondary school education <i>or</i></li> <li>• Up to two years of on-the-job training, training courses or specific work experience</li> </ul>		
<b>SKILL LEVEL D</b>	<ul style="list-style-type: none"> <li>• Short work demonstration or on-the-job training <i>or</i></li> <li>• No formal educational requirements</li> </ul>		

### ***Skill Type***

Skill type is defined as the type of work performed, although other factors related to skill type are also reflected in the NOC. One of these factors is similarity with respect to the educational discipline or field of study required for entry into an occupation. Another factor is the industry of employment where experience within an internal job ladder or within a specific industry is usually a prerequisite for entry.

Ten broad occupational categories, based on skill type, are identified in the NOC.

### ***0. Management Occupations***

This skill type category contains legislators, senior management occupations and middle management occupations.

### ***1. Business, Finance and Administration***

This category contains occupations that are concerned with providing financial and business services, administrative and



regulatory services and clerical supervision and support services. Some occupations in this category are unique to the financial and business service sectors; however, most are found in all industries.

Often, occupations at skill levels A and B are supplied from educational programs specific to the profession or occupation. Some occupations at skill level B are also supplied from experienced workers in related clerical occupations.

## ***2. Natural and Applied Sciences and Related Occupations***

This category contains professional and technical occupations in the sciences, including physical and life sciences, engineering, architecture and information technology.

Occupations in this skill type category require post-secondary education in an appropriate scientific discipline. Progression from occupations in skill level B to occupations in skill level A is not usually possible without completion of additional formal education.

## ***3. Health Occupations***

This category includes occupations concerned with providing health care services directly to patients and occupations that provide support to professional and technical staff. Most occupations in this skill type category require post-secondary education in a related health care program. Progression from occupations in skill level B to occupations in skill level A is not usually possible without completion of additional formal education. Occupations in skill level C require short training programs.

## ***4. Occupations in Social Science, Education, Government Service and Religion***

This skill type category includes a range of occupations that are concerned with law, teaching, counselling, conducting social science research, developing government policy, and administering government and other programs.

Occupations in this skill type category usually require completion of a related post-secondary program. Progression from occupations in skill

level B to occupations in skill level A is not usually possible without completion of additional formal education.

## ***5. Occupations in Art, Culture, Recreation and Sport***

This skill type category includes professional and technical occupations related to art and culture, including the performing arts, film and video, broadcasting, journalism, writing, creative design, libraries and museums. It also includes occupations in recreation and sport.

This category is characterized by occupations which are linked by subject matter to formal post-secondary educational programs but which have, for the most part, a range of acceptable qualifications. Occupations in this category are also characterized by a requirement for creative talent, such as for designers and performers, or for athletic ability. Unit groups which contain occupations for which university graduation in a professional discipline is usually required, such as journalism or library science, have been classified in skill level A. Most others have been classified in skill level B in recognition of the wide range of entry routes that are possible.

## ***6. Sales and Service***

This skill type category contains sales occupations, personal and protective service occupations and occupations related to the hospitality and tourism industries.

Occupations in skill level B of this category can be linked, for the most part, to formal post-secondary or occupation-specific training programs. Others are characterized by periods of formal on-the-job training other than apprenticeship. Progression from occupations in skill level C or D to those in skill level B usually requires completion of a related training program. Some progression through experience is possible for supervisory positions.

## ***7. Trades, Transport and Equipment Operators and Related Occupations***

This skill type category includes construction and mechanical trades, trades supervisors and

contractors and operators of transportation and heavy equipment. These occupations are found in a wide range of industrial sectors, with many occurring in the construction and transportation industries.

This category includes most of the apprenticeable trades, including all of those related to the construction industry. Other occupations in this category usually require completion of college or other programs combined with on-the-job training. Progression to supervisory or self-employed contractor status is possible with experience. There is limited mobility or transferability of skills among occupations in this category due to specific apprenticeship, training and licensing requirements for most occupations.

#### ***8. Occupations Unique to Primary Industry***

This category contains supervisory and equipment operation occupations in the natural resource-based sectors of mining, oil and gas production, forestry and logging, agriculture, horticulture and fishing. Most occupations in this category are industry specific and do not occur outside of the primary industries.

Occupations within skill level B of this category generally require completion of college or other training programs. Some, however, are characterized by on-the-job training and progression through experience.

#### ***9. Occupations Unique to Processing, Manufacturing and Utilities***

This category contains supervisory and production occupations in manufacturing, processing and utilities.

Occupations in this category are characterized by internal progression and on-the-job training. Workers typically start out in these occupations at entry-level positions and progress to increasingly higher skilled occupations through experience. Mobility between employers or industries may be limited by seniority provisions of collective agreements. The occupations in skill level B of this category are increasingly technical in nature and post-secondary training programs are available for some.

#### ***Industry***

Industry and occupation are separate variables which can be cross-tabulated to provide detailed information on employment. However, many occupations are found almost solely within one particular industry. For example, mining and automobile assembly occupations occur each within their respective industrial sectors.

During the research and development of the NOC, it was realized that in many industries, occupational mobility is determined more by internal job ladders than by functional specialization. In consequence, some unit groups include workers of a particular skill level within a specific industry. Although the occupational breakdown resembles in part an industrial breakdown, the variables remain separate and distinct.

Industry was used in the development of classification categories for senior management occupations, for occupations unique to primary industry and for occupations in manufacturing, processing and utilities.

#### ***Occupational Mobility***

In developing the NOC, an effort was made to consider mobility or transferability of skills between occupations. The objective was to develop unit groups where the potential for mobility or substitution of workers would be greater within the group than between groups. Movement within groups usually follows when the group is homogeneous in skill level and skill type, indicating increased potential for transferability of competencies. Movement between groups usually reflects a change in skill level (e.g., vertical mobility) or a change in skill type (e.g., acquisition of new specialized skills).

The degree of occupational mobility that exists for unit groups varies. Many unit group descriptions include a statement that indicates the potential for, and type of, mobility that characterizes the unit group.

#### ***Other Classification Considerations***

In addition to the previously mentioned criteria, other factors were considered in

determining the boundaries between unit groups and the contents of each group. These additional factors were the size of the unit groups and the codeability or operational feasibility of the groups. Codeability relates to the ease of accurately coding or assigning reported job titles from survey respondents to the occupational groups of the classification.

The size (or estimated number of workers) of the unit group was considered for reasons of statistical reliability and confidentiality. Generally, unit groups which contain fewer than 1,000 Canadian workers have not been delineated.

Because the NOC structure is used to code responses to the Census and other surveys, it must provide a set of unit groups that can be used for this operational application. The insufficient precision of some survey responses and ambiguities of language were given consideration in finalizing the unit groups.

### **The NOC Matrix**

A matrix classifying the NOC minor groups has been developed to provide an overview of the entire classification and to show the organization of the groups by both skill level and skill type.

The matrix is found inside the front cover of this publication.

The horizontal rows of the matrix correspond to the four skill level categories. The vertical columns of the matrix correspond to the nine skill type categories. The 10th skill type category, management, is organized across the top of the matrix. Within each cell of the matrix, the minor groups that belong to each skill level and skill type category are listed.

Usually each cell of the matrix constitutes an NOC major group, except for management, which spans all the skill type categories. For example, the seven minor groups listed in the matrix cell for *Skill Level D* and *Sales and Service* combine to form major group 66 – *Elemental Sales and Service Occupations*.

### **Issues and Conventions of the NOC**

Some of the many issues that were encountered in the development of the NOC and the conventions adopted in response, are discussed in the following paragraphs.

#### ***Management Occupations***

Management occupations present a special problem for reliable coding of occupational survey responses. In many cases there is little indication of the level of responsibility, the size of the enterprise or division managed, or the field of specialization.

To be of practical use, a classification of managers must be a compromise between the theoretically optimal and the practical solutions.

Senior management occupations (in major group 00) have been divided on the basis of industry of employment into five unit groups. The breakdown was originally made according to the *Standard Industrial Classification* (SIC) and was changed in this revision to conform to the *North American Industry Classification System* (NAICS).

*Middle and Other Management Occupations* are divided into 16 minor groups and 38 unit groups on the basis of specialization (e.g., *Purchasing Managers*) or industry of employment (e.g., *Postal and Courier Services Managers*). In certain cases (e.g., *Transportation Managers*) groups defined by industry also contain managers in that specialization regardless of their industry of employment. The breakdown by industry corresponds to groups in the NAICS.

Management occupations have not been assigned to a skill level category. It is recognized that there is a range of acceptable educational and training requirements for managerial occupations.

#### ***Supervisors***

Supervisors and foremen/women have generally been classified in skill level B.

In most cases, professional and technical occupations are supervised by managerial or

professional personnel respectively. However, where supervisors are identified for professional and technical groups, they are generally classified in the same unit groups as the occupations supervised.

Supervisors in the following occupational categories have been classified in supervisor unit groups or minor groups separate from the workers supervised:

- clerical and administrative occupations
- nursing occupations
- sales and service occupations
- trades and transport and equipment operators
- occupations in primary industry
- occupations unique to processing, manufacturing and utilities.

Most minor and unit groups in the occupational categories listed above have a corresponding supervisory group. Occasionally, as in minor group 626 *Police Officers and Firefighters*, supervision is provided by managers and there is no corresponding supervisory group in major group 62.

### **Trades**

All apprenticeable trades are included in skill level B. Their inclusion does not imply an exact equivalence of skill between all trades, but rather that they occupy a range that lies within the boundaries of this skill level category. Information on entry requirements is provided within each unit group description.

### **Inspectors, Testers and Graders**

Generally, inspectors who require post-secondary education have been classified in separate unit groups in skill level B or with technicians and technologists, also in skill level B. Other non-technical inspectors, testers, graders and samplers have been included either in separate unit groups covering occupations in processing industries or in unit groups of assemblers and fabricators in manufacturing industries. This is reflective of patterns of employment found within industries and the increasing responsibility for quality control that is placed on manufacturing production workers.

### **Apprentices and Trainees**

Apprentices and trainees have been classified in the same unit groups as the occupations for which they are training. Similarly, interns, residents and articling students are classified with their respective professional groups.

This convention has been adopted of necessity to prevent a proliferation of unit groups of apprentices. It is not intended to imply equivalence or interchangeability of apprentices or trainees with fully qualified workers.

### **NOC Coding System**

One of the features of the National Occupational Classification is its system of codes. Each major group, minor group and unit group has its own unique code.

A two-digit code is assigned at the major group level. A third digit is added at the minor group level and a fourth digit is added at the unit group level.

Major Group 31 – Professional Occupations in Health

Minor Group 314 – Professional Occupations in Therapy and Assessment

Unit Group 3142 – Physiotherapists

The first two digits of each code convey meaning with respect to the group's skill type and skill level category.

For all non-management occupations, the **first digit** of each code identifies the major, minor and unit group as belonging to one of the **skill type** categories.

Similarly, for all non-management occupations, the **second digit** of each code identifies the major, minor and unit group as belonging to one of the four **skill level** categories.

For management occupations, the first two digits also convey meaning. The first digit is always **0** to convey management, while the

second digit conveys the skill type category where the management occupation is found.

The following charts summarize and illustrate the meanings embedded in the coding system.

***When the first digit is...***

1	<b><i>...the skill type category is</i></b> Business, Finance and Administration Occupations
2	Natural and Applied Sciences and Related Occupations
3	Health Occupations
4	Occupations in Social Science, Education, Government Service and Religion
5	Occupations in Art, Culture, Recreation and Sport
6	Sales and Service Occupations
7	Trades, Transport and Equipment Operators and Related Occupations
8	Occupations Unique to Primary Industry
9	Occupations Unique to Processing, Manufacturing and Utilities

***When the second digit is...***

1	<b><i>...the skill level category is</i></b> Skill Level A (Professional Occupations)
2 or 3	Skill Level B (Technical, Paraprofessional and Skilled Occupations)
4 or 5	Skill Level C (Intermediate Occupations)
6	Skill Level D (Labouring and Elemental Occupations)

**Important Note:**

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This applies to all occupations except management occupations. For management, the first digit is always 0 and the second digit represents the skill type categories, from 1 to 9, as above.

### Examples of Codes and their Meaning

#### 9231

The first digit indicates skill type category 9  
Occupations Unique to Processing, Manufacturing and Utilities

The second digit indicates skill level category B

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#### 6443

The first digit indicates skill type category 6  
Sales and Service Occupations

The second digit indicates skill level category C

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#### 0212

The first digit 0 always indicates a management occupation

The second digit indicates skill type category 2  
Natural and Applied Sciences and Related Occupations

### Format of Unit Group Descriptions

Each NOC unit group description consists of several standardized sections which define and describe its content.

#### *Lead statement*

This section provides a general description of the content and boundaries of the unit group and indicates the main activities of occupations within the unit group. It also indicates the kinds of industries or establishments in which the occupations are found. The list of places of employment is not always exhaustive, but can assist in clarifying the occupations described and in differentiating them from occupations found in other groups.

### *Examples of titles classified in this unit group*

This section is a list of titles commonly used in the labour market. The titles are intended to illustrate the contents and range of the occupational group. This is not an exhaustive list of titles; additional occupational titles are included in the alphabetical *Index of Titles*.

### *Main duties*

This section describes the main duties of occupations in the unit group. Depending on the contents of the unit group, one of three formats was selected for describing main duties.

- A series of statements that can be applied to all occupations in the unit group. This format was selected for unit groups that contain a single core occupation, such as

2146 *Aerospace Engineers* and 1242 *Legal Secretaries*. This format was also selected for unit groups that contain a range of related titles that nevertheless share a set of common duties, such as 9512 *Forging Machine Operators* and 1441 *Administrative Clerks*.

- Two or more sub-sets of occupations with a series of statements that apply to each component. This format was selected for unit groups that consist of two or more sub-components which, while similar enough to be in the same unit group, can be described separately. Examples of unit groups with this format are 3141 *Audiologists and Speech-Language Pathologists* and 5125 *Translators, Terminologists and Interpreters*.
- A series of brief descriptive statements that are linked to specific occupations within a group. This format was selected for unit groups that contain a series of occupations which, while similar enough to be in the same unit group, can be described separately. Examples of unit groups with this format include 6463 *By-law Enforcement and Other Regulatory Officers, n.e.c.* and 5226 *Other Technical and Co-ordinating Occupations in Motion Pictures, Broadcasting and the Performing Arts*.

For some unit groups, a statement appears in italics at the end of the main duties section. This identifies specializations that exist within the occupational area encompassed by the unit group.

### ***Employment requirements***

This section describes the employment requirements for the unit group. Several types of requirements are identified in this section and are listed in the following order.

- Type and level of formal education (for example, secondary school, college diploma, university degree). Efforts were made to be as specific as possible, though many unit groups have a range of acceptable educational requirements.

- Specific training (for example, apprenticeship training, on-the-job training, occupation-specific training courses).
- Experience in another occupation (for example, supervisors usually require several years of experience in the occupation that they supervise).
- Licences, certificates or registration.
- Other requirements (for example, athletic ability or artistic talent).

This section does not attempt to describe personal suitability requirements that are assessed by employers as part of the hiring process.

Some occupations have very definite employment requirements while for others, there is no consensus or there may exist a range of acceptable requirements. To reflect this variation in the labour market, this section describes employment requirements using the following terminology:

- “... is required” (to indicate a definite requirement);
- “...is usually required” (to indicate something that is usually required by the majority of employers, but not always required by all employers); and
- “... may be required” (to indicate something that may be required by some employers, but on a less frequent basis).

Note: For reasons of brevity, in this section the term college includes the following types of post-secondary institutions: community colleges, CÉGEPs, technical institutes, trade schools and agricultural colleges. In some provinces it may also include private training organizations, music conservatories and other non-degree granting institutions.

### ***Additional information***

This section appears in some unit group descriptions. It provides information on the following:

- progression to other occupations (such as supervisory or management positions);

- mobility patterns (for example, identifying occupations that are part of internal lines of progression);
- trends and forthcoming changes in the unit group's employment requirements; and
- other information to clarify and define the unit group.

### ***Classified elsewhere***

This section clarifies the boundaries of the unit group by identifying other unit groups or related occupations that are classified elsewhere. Unit groups or individual occupations are cited in this section when they bear a functional similarity to the unit group or when similar titles occur.

### **Career Development Version of the NOC**

The *Career Handbook* is the counselling version of the NOC that is used by career, educational and employment counselling professionals, vocational rehabilitation specialists and a wide range of other users. It is used primarily for career exploration and development purposes and provides a basis for facilitating informed career decision making. The *Career Handbook* is also the foundation for many career development products and resources.

The *Career Handbook* includes ratings on occupational descriptor scales such as aptitudes, interests, functional data/people/things activities, physical activities, environmental conditions and education/training indicators. Descriptor profiles, based on these ratings, provide the linkage between occupations and worker characteristics. This information is of critical importance in the areas of skill development and career planning.

### **Relationship between NOC 2001 and the National Occupational Classification for Statistics**

The NOC forms the basis of the NOC-S which is used by Statistics Canada to collect and report data on occupations from the Census and other surveys.

The revision exercise had as one of its objectives a further streamlining of the classification to unify and eliminate previous differences. A Statistics Canada and HRDC joint working committee was established to achieve consensus on discrepancies between the two publications. The revisions have led to an improved classification structure from the perspectives of both departments. The areas outlined below indicate differences that still exist primarily due to the operational conventions to which Statistics Canada must adhere.

The NOC and the NOC-S differ in their classification of military personnel. The NOC unit groups for military occupations (0643 *Commissioned Officers, Armed Forces* and 6464 *Occupations Unique to the Armed Forces*) are defined to include only those military personnel whose occupations do not have a civilian counterpart (e.g., infantry officers, artillery soldiers). Those military personnel whose occupations do have a civilian counterpart are classified in the unit group appropriate to the occupation (e.g., dental officers are classified with dentists and military police officers are classified with police officers). On the other hand, all military personnel, regardless of whether their occupations have civilian counterparts, are classified to the corresponding NOC-S unit groups: *Commissioned Officers, Armed Forces* or *Other Ranks, Armed Forces*.

The minor groups and broad occupational categories of the NOC-S are the same as those of the NOC, except to the extent of the variations created by the differences in the treatment of the military.

The major group level of the NOC-S structure represents an alternate statistical aggregation of the NOC and consists of 47 major groups based on skill type. The table that follows identifies the NOC major groups and the corresponding NOC-S major groups. This alternate aggregation enables the statistical balancing of proportions of the labour force where additional division of the NOC two-digit groups is possible due to population sizes. It is important to note that the NOC and NOC-S are



identical at the unit group and minor group levels.

Statistics Canada has implemented a two-part numbering system in its publication to link the statistical aggregation to the NOC codes. The first part of the numbering system indicates the placement of the minor and unit groups within the NOC-S aggregation structure, and the second part of the numbering system, following a decimal point, represents the NOC code. This two-part numbering system allows users to relate data produced by Statistics Canada to the minor and unit groups of the NOC. The NOC and the NOC-S represent one classification framework for measuring economic activity in the Canadian labour market and for providing information about the work of Canadians.

The structure of the NOC-S is found in the Appendix of this publication. Further information about the NOC-S can be obtained from:

Standards Division  
Statistics Canada  
Jean Talon Building, 12th Floor  
Ottawa, Ontario  
K1A 0T6

Phone: (613) 951-8576  
Fax: (613) 951-8578  
Internet: [http://www.statcan.ca/english/Subjects/Standard/standard\\_classifications.htm](http://www.statcan.ca/english/Subjects/Standard/standard_classifications.htm)

<b>Skill Type Categories and Major Groups of the NOC</b>	<b>Broad Occupational Categories and Major Groups of the NOC-S</b>
<b>NOC</b>	<b>NOC-S</b>
<b>MANAGEMENT OCCUPATIONS</b>	
<b>00</b> Senior Management Occupations  <b>01-09</b> Middle and Other Management Occupations	<b>A0</b> Senior Management Occupations  <b>A1</b> Specialist Managers  <b>A2</b> Managers in Retail Trade, Food and Accommodation Services  <b>A3</b> Other Managers n.e.c.
<b>BUSINESS, FINANCE AND ADMINISTRATION OCCUPATIONS</b>	
<b>11</b> Professional Occupations in Business and Finance  <b>12</b> Skilled Administrative and Business Occupations  <b>14</b> Clerical Occupations	<b>B0</b> Professional Occupations in Business and Finance  <b>B1</b> Finance and Insurance Administrative Occupations  <b>B2</b> Secretaries  <b>B3</b> Administrative and Regulatory Occupations  <b>B4</b> Clerical Supervisors  <b>B5</b> Clerical Occupations
<b>NATURAL AND APPLIED SCIENCES AND RELATED OCCUPATIONS</b>	
<b>21</b> Professional Occupations in Natural and Applied Sciences  <b>22</b> Technical Occupations Related to Natural and Applied Sciences	<b>C0</b> Professional Occupations in Natural and Applied Sciences  <b>C1</b> Technical Occupations Related to Natural and Applied Sciences
<b>HEALTH OCCUPATIONS</b>	
<b>31</b> Professional Occupations in Health  <b>32</b> Technical and Skilled Occupations in Health  <b>34</b> Assisting Occupations in Support of Health Services	<b>D0</b> Professional Occupations in Health  <b>D1</b> Nurse Supervisors and Registered Nurses  <b>D2</b> Technical and Related Occupations in Health  <b>D3</b> Assisting Occupations in Support of Health Services

NOC	NOC-S
<b>OCCUPATIONS IN SOCIAL SCIENCE, EDUCATION, GOVERNMENT SERVICE AND RELIGION</b>	
<b>41</b> Professional Occupations in Social Science, Education, Government Services and Religion	<b>E0</b> Judges, Lawyers, Psychologists, Social Workers, Ministers of Religion, and Policy and Program Officers
<b>42</b> Paraprofessional Occupations in Law, Social Services, Education and Religion	<b>E1</b> Teachers and Professors <b>E2</b> Paralegals, Social Services Workers and Occupations in Education and Religion, n.e.c.
<b>OCCUPATIONS IN ART, CULTURE, RECREATION AND SPORT</b>	
<b>51</b> Professional Occupations in Art and Culture	<b>F0</b> Professional Occupations in Art and Culture
<b>52</b> Technical and Skilled Occupations in Art, Culture, Recreation and Sport	<b>F1</b> Technical Occupations in Art, Culture, Recreation and Sport
<b>SALES AND SERVICE OCCUPATIONS</b>	
<b>62</b> Skilled Sales and Service Occupations	<b>G0</b> Sales and Service Supervisors
<b>64</b> Intermediate Sales and Service Occupations	<b>G1</b> Wholesale, Technical, Insurance, Real Estate Sales Specialists, and Retail, Wholesale and Grain Buyers
<b>66</b> Elemental Sales and Service Occupations	<b>G2</b> Retail Salespersons and Sales Clerks <b>G3</b> Cashiers <b>G4</b> Chefs and Cooks <b>G5</b> Occupations in Food and Beverage Service <b>G6</b> Occupations in Protective Services <b>G7</b> Occupations in Travel and Accommodation including Attendants in Recreation and Sport <b>G8</b> Childcare and Home Support Workers <b>G9</b> Sales and Service Occupations n.e.c.

**NOC****NOC-S****TRADES, TRANSPORT AND EQUIPMENT OPERATORS AND RELATED OCCUPATIONS**

**72-73** Trades and Skilled Transport and Equipment Operators

**74** Intermediate Occupations in Transport, Equipment Operation, Installation and Maintenance

**76** Trades Helpers, Construction Labourers and Related Occupations

**H0** Contractors and Supervisors in Trades and Transportation

**H1** Construction Trades

**H2** Stationary Engineers, Power Station Operators and Electrical Trades and Telecommunications Occupations

**H3** Machinists, Metal Forming, Shaping and Erecting Occupations

**H4** Mechanics

**H5** Other Trades n.e.c.

**H6** Heavy Equipment and Crane Operators including Drillers

**H7** Transportation Equipment Operators and Related Workers, excluding Labourers

**H8** Trades Helpers, Construction and Transportation Labourers and Related Occupations

**OCCUPATIONS UNIQUE TO PRIMARY INDUSTRY**

**82** Skilled Occupations in Primary Industry

**84** Intermediate Occupations in Primary Industry

**86** Labourers in Primary Industry

**I0** Occupations Unique to Agriculture excluding Labourers

**I1** Occupations Unique to Forestry Operations, Mining, Oil and Gas Extraction, and Fishing, excluding Labourers

**I2** Primary Production Labourers

NOC	NOC-S
<b>OCCUPATIONS UNIQUE TO PROCESSING, MANUFACTURING AND UTILITIES</b>	
<b>92</b> Processing, Manufacturing and Utilities Supervisors and Skilled Operators	<b>J0</b> Supervisors in Manufacturing
<b>94-95</b> Processing and Manufacturing Machine Operators and Assemblers	<b>J1</b> Machine Operators in Manufacturing
<b>96</b> Labourers in Processing, Manufacturing and Utilities	<b>J2</b> Assemblers in Manufacturing
	<b>J3</b> Labourers in Processing, Manufacturing and Utilities

**Note:** The NOC-S major groups reflect the alternate statistical aggregation of the NOC unit groups.

## NOC Research and Development

The following section outlines the methods and procedures that were implemented to revise the NOC. For further details on the research undertaken for the initial development of the NOC, readers may refer to the Introduction to the previous edition.

### *Methodology*

Research on occupational evolution, work skills and competencies has been ongoing since the implementation of the NOC in the early 1990s. A large contributing factor to the research has been the input from public and private sector users identifying particular occupational areas that required additional analysis. The changes in some of these occupational areas were significant enough to require modifications to the structure of the classification system itself.

Research analysts were assigned responsibility for particular NOC skill type categories, including management occupations. Based on input from a wide range of sources that included labour market analysts, sector councils, immigration specialists, counsellors and professional organizations, the analysts determined the depth of investigation required for their assigned occupational areas.

A multifaceted approach to research was established to make use of the large amount of

material that had been collected since the implementation of the NOC. Analysts consulted documents that included secondary sources, such as sector studies, occupational analyses, occupational standards and research papers and articles. Data from other sources, such as a survey of entry requirements for regulated professions and trades, Essential Skills research, the Census and the Labour Force Survey, were also consulted.

Analysts determined the extent of research required for their particular areas of responsibility. For many occupations, validation of the current NOC information indicated that there was general satisfaction with the content of the occupational groups and their placement within the overall classification structure. For other groups the information in the main duties and employment requirements sections required significant updating. Internet-based research, data from secondary sources and interviews with key occupational specialists provided the basis for the proposed revisions in these areas. Revisions were verified with occupational contacts.

A few occupational areas of the economy had undergone significant restructuring or modification. In-depth research was necessary to examine both the content and the positioning of these occupations in the classification structure to reflect more

accurately the reality of the current labour market. These areas included information technology occupations, call centre services, electronic commerce, clerical work, health care support, recycling and manufacturing. The impact of technology on work in many occupational areas such as telecommunications, new or interactive media, publishing, and computer-controlled machining operations in industry, was also studied. Research projects and surveys were conducted by academics, private research consultants and firms, divisions within Statistics Canada and in conjunction with large research initiatives undertaken by some sector council organizations.

### ***Procedures***

Following the analysis of research findings, the compilation of information from other sources and its incorporation in a standardized NOC revision format, the work was submitted to an internal HRDC review committee for approval. The proposed revisions were then forwarded to Statistics Canada for internal review to assess implementation concerns related to coding, structural consistency and other statistical considerations. The joint working committee met to discuss identified issues and to achieve consensus on final decisions.

### **Contact Information**

For further information about the *National Occupational Classification 2001* and related occupational systems, contact:

Skills and Labour Market Information Division  
Workplace Skills Branch

Phone: (613) 952-9440

Internet: <http://www23.hrdc-drhc.gc.ca>