Business Technology Management (BTM)
Learning Outcomes and Competency Standards

Version 1.0 – 2009
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1. What is Business Technology Management

Business Technology Management (BTM) was introduced in 2009 at the undergraduate level in response to the feedback that new ICT graduates didn’t have the skills needed by businesses. Working together with academic institutions, industry and sector associations, ITAC Talent defined a set of learning outcomes and competency standards required by industry, drawing heavily on relevant international standards for similar programs.

The rise of packaged software, cloud computing, Big Data, Web 2.0 and the need for information and communications technologies (ICT) to support sustainability initiatives - while also driving the ever-increasing pace of innovation – suggests that technology education needs to change to reflect changes in workplace roles. Today’s technologies enable new ways of working such as virtual global teams, networked business models and social media, requiring tech education to adopt a contemporary, fresh awareness of the role and use of technology in all organizations.

BTM is an innovative education solution that enhances academic and career opportunities for post-secondary business students immersed in the realm of technology and innovation. It equips graduates with the right technical and business skills to enter the workplace.

BTM programs create professionals who have the knowledge, skills and competencies to lead and support the effective, competitive use of information technologies.

Since its development in 2009, BTM has impacted thousands of graduates and is currently offered at dozens of post-secondary institutions across Canada. BTM applications are rising by an average of 24% per year.

**BTM 2.0 – expanding to meet the demand**

Through generous support from Employment and Social Development Canada (ESDC) in 2014, ITAC Talent has launched a three-year expansion initiative for BTM to greatly increase enrolments and graduates and to help meet industry’s current and anticipated demand for these professionals.

The strategy for expansion includes:

- Expand number of BTM programs to over 50 across Canada by 2017
- Build a prioritized list of National Occupational Standards (NOS) for BTM as a framework for professional education and career development
- Professionalize the BTM sector through program accreditation, professional certification and a BTM Association for professionals
- Create national brand awareness of BTM and its importance to bridging the skills gap through a broad range of national marketing activities and special events.

For more information on the expansion programs contact ITAC.
2. Purpose

The war is on for Business Technology Management (BTM) talent in Canada. Canadian employers can’t find enough talent with the combined business and technology knowledge as well as functional skills in project management, communications, collaboration and leadership. Some 200,000 are already employed in BTM jobs – twice as many as 10 years ago – and demand continues to grow. Employers will need to fill more than 50,000 BTM-related jobs in the next few years.

Demand is growing because tech-related jobs play increasingly important roles in every organization. Employees with a combination of business and technology skills aren’t only needed by the tech industry. They’re across all sectors such as natural resources, manufacturing, health care, government and retail.
3. Interested in offering a BTM program?

1. First, assess if your proposed offering matches the BTM learning outcomes and other requirements, determine the alignment between the proposed program and the BTM outcomes, and identify any material gaps and how these gaps may be filled. The educational institution grants the academic credential, not ITAC Talent. To proceed with, and grant, the core BTM academic credentials, the educational institution is free to proceed at any time. The educational institution needs to conduct a self-assessment against the outcomes and determine the relative fit. If you feel comfortable with it, having reviewed our learning outcomes, then that is what counts.

2. Contact ITAC Talent when you are planning your program. ITAC Talent staff can assist with any specific questions you have related to the learning outcomes and competency standards.

3. Promote your program via the ITAC Talent and CareerMash websites

4. Participate in ITAC Talent BTM related events
4. BTM Learning Outcomes & Competency Standards

The BTM is based on a set of learning outcomes and competency standards. It does not prescribe curriculum, but rather the things that students should learn and know when they graduate the program and enter the workforce. These outcomes and standards are grouped in six areas, as follows:

1. Integrative. This knowledge area contains learning outcomes that integrate the competencies developed in the other five knowledge areas. It produces a “deliverable” of direct relevance to employers.

2. Personal & interpersonal. The ability to make a meaningful contribution depends upon one’s self-knowledge and ability to have constructive, long term, interactions with others. Successful leaders have strong personal and interpersonal competencies.

3. Business. To be effective in the workplace one must have both the broad context of business – its role and place in society – and a working knowledge of how business operates.

4. Technology. BTM graduates must understand information and communications technologies, their current capabilities, and future trends.

5. Technology in business. This knowledge area is designed to synthesize the knowledge and competencies gained in the foundational knowledge areas and create an additional competency in understanding: the potential (economic, personal, societal), the risks of, and the governance, acquisition, and management of ICTs in and for business.

6. Processes, projects, and change. BTM graduates will gain the foundations that enable them to help create well designed business processes, well managed projects, and support for the individuals and groups undergoing change.
What is a Learning Outcome?

A learning outcome specifies what learners’ new behaviours will be after a learning experience: the knowledge, skills, and aptitudes that the students will gain. A learning outcome begins with an action verb and describes something observable or measurable.

What is a Competency Standard?

A competency standard is a description of the employers’ requirements for a BTM graduate’s level of competency for a learning outcome.

Defining competency standards for each learning outcome has the following objectives and benefits:

- Students need to reach minimum levels of competency to:
  - Be qualified for and benefit from co-op and other work experience during the program
  - Be hirable upon graduation into full time positions
- Employers clearly understand the minimum level of competency BTM graduates will have in each learning outcome
- Educators clearly understand the level of competency that must be achieved

ITAC TALENT can fulfill its mandate of growing the market of and for appropriately skilled ICT workers.
5. BTM graduates competency requirements

BTM graduates must demonstrate that 3 elements of learning have taken place: theories/best practices have been taught, students have received feedback, and students have reflected and improved.

BTM graduates will demonstrate competency in:

1. **Knowing.** For all learning outcomes students must be able to define, discuss, compare and use applicable concepts analytically.

2. **Doing.** For just under half the learning outcomes an additional level of competency is required: students must be able to demonstrate the ability to use their knowledge and skills in a practical way. Students demonstrate “doing” when they can use knowledge to create a practical artifact (e.g., business process model, project plan, data model, business case).

Employers understand that many of these “doing” competency standards cannot be fully achieved in a purely classroom situation. BTM programs will require support from employers if these standards are to be reliably achieved.

The BTM draws on existing competency models defined by recognized professional standards bodies and/or leading academics in the field of learning.

For learning outcomes that only have knowing requirements, the competency standard uses a summarized version of Bloom’s taxonomy\(^1\) of levels of learning. Outcomes that have a doing competency requirement draw on recognized professional standards.

**Bloom’s Taxonomy**

The revised Bloom’s Taxonomy includes the following:

1. **Remembering:** Retrieving, recognizing, and recalling relevant knowledge from long-term memory.

2. **Understanding:** Constructing meaning from oral, written, and graphic messages through interpreting, exemplifying, classifying, summarizing, inferring, comparing, and explaining.

3. **Applying:** Carrying out or using a procedure through executing, or implementing.

4. **Analyzing:** Breaking material into constituent parts, determining how the parts relate to one another and to an overall structure or purpose through differentiating, organizing, and attributing.

5. **Evaluating:** Making judgments based on criteria and standards through checking and critiquing.

6. **Creating:** Putting elements together to form a coherent or functional whole; reorganizing elements into a new pattern or structure through generating, planning, or producing.

In the BTM, we have compressed the taxonomy to 4 levels.

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\(^1\) An introduction to Bloom’s original taxonomy can be found [here](#). A second reference, located [here](#), introduces the updates to Bloom’s original taxonomy proposed in the 1990s.
1. Bloom’s #1 Remembering and #2 Understanding. Learning outcomes at this level start with “Exhibit an understanding of…”

2. Bloom’s #3 Applying. Learning outcomes at this level start with “Be able to explain…”

3. Bloom’s #4 Analyzing and #5 Evaluating. Learning outcomes at this level start with “Demonstrate understanding of…” or “Describe…”

4. Bloom’s #6 Creating. Learning outcomes at this level start with “Demonstrate the ability to…”

**Professional competency models in the BTM**

The BTM draws on competency standards from 5 recognized professional bodies.

1. **Skills Framework for Information Age Version 4** (SFIA) published by the SFIA Foundation (publicly available)

2. **Project Management Institute** (PMI) **Career Framework for Organizations** (Version at [www.pmi.org](http://www.pmi.org) as of July 2009) which includes: the **Project Manager Competency Development Framework** (PMCDF) Second Edition (must be a PMI member to download, hard copy available for purchase), and **PMI PathPro Job Ladders** (must be a PMI member to access). The **Project Management Body of Knowledge 4th Edition** (PMBOK®) is referenced extensively in these documents. A Guide to the Project Management Body of Knowledge 4th Edition (PMBOK® Guide) is also a useful reference.

3. **International Institute of Business Analysis (IIBA) Business Analyst Career Ladder** (Version at [www.theiiba.org](http://www.theiiba.org) as of July 2009) (must be a IIBA member to download). The Business Analysis Body of Knowledge version 2.0 (BABOK®) is referenced in this document.

4. **Certified Management Consultants of Canada (CMC-Canada) CMC Competency Profile September 1999 and CMC Competency Framework Summary August 2008** (publicly available). The CMC Common Body of Knowledge 2000 Edition (CMCBOK®) is referenced in these documents.

5. **Management Standards Centre (MSC)**, (part of the **Chartered Management Institute**) National Occupational Standards (NOS) for Management and Leadership 2008 Edition (publicly available, printed copy available for purchase)

**Competency Standards and Guidance Labeling**

Where a competency standard is defined or guidance is provided for a learning outcome the format of the label is:

```
<Label> { “-” <Skill Reference Code> | <Guidance Reference> } { “=” <Required Competency Level Code> }
```

Where:

- `<Label>` indicates which model is used to define the competency standard or provide guidance. In summary:
  1. BLOM = Updated Bloom’s Taxonomy
  2. SFIA = Skills Framework for the Information Age
  3. PMI = Project Management Institute

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2 “The Standards Setting Body for Management and Leadership”
4. IIBA = International Institute of Business Analysis

5. CMC = Certified Management Consultants of Canada, CMC Competency Profile and associated CMC Competency Framework Summary

6. MSC = Management Standards Centre, National Occupational Standard

<Skill Reference Code>. Where a competency standard for a “doing” learning outcome is being set, a skill reference code is provided which provides a pointer to the specific description of the relevant skill in the selected competency model. The skill reference code is only required for doing competencies.

<Guidance Reference> Where guidance on the employers’ competency requirements for a “doing” learning outcome is being provided, the guidance source will indicate the applicable source document to be consulted.

*Guidance is show in italics in this font.*

<Required Competency Level Code> specifies the required competency level the student must achieve using competency level scale from the selected competency model. In cases where the competency standard is provided for guidance only, this element is omitted (see below for details).

Details of the Labels, Skill Reference Codes, Guidance References and Required Competency Level Codes for each competency model have been described above.
### 6. BTM Learning Outcomes & Competency Standards - Details

#### I1 - Integrative

<table>
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<tr>
<th>Ref</th>
<th>Learning Outcome</th>
<th>Competency Standard</th>
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</table>
| I1  | Demonstrate the ability to effectively plan, manage and lead a business technology project. | **SFIA-PRMG=4 (Project Management)**  
*Introduction to this Skill:* “The management of projects, typically (but not exclusively) involving the development and implementation of business processes to meet identified business needs, acquiring and utilising the necessary resources and skills, within agreed parameters of cost, timescales, and quality.”  
...  
*Level 4 Skill Description:* Defines, documents and carries out small projects (typically less than six months, with a small team, limited budget, no interdependency with other projects, and no significant strategic impact), actively participating in all phases. Identifies, assesses and manages risks to the success of the project. Prepares realistic project and quality plans and tracks activities against the plans, providing regular and accurate reports to stakeholders as appropriate. Monitors costs, timescales and resources used, and takes action where these deviate from agreed tolerances. Ensures that own projects are formally closed and, where appropriate, subsequently reviewed, and that lessons learned are recorded.”  

**SFIA-PROF=4 (Programme and Project Support Office)**  
*Introduction to this Skill:* “The provision of support and guidance on programme and project management processes, procedures, tools and techniques to programme and project managers and their teams. The use of project management software. The development, production and maintenance of time, resource, cost and exception plans. The tracking and reporting of progress and performance of projects (including those performed by third parties). The maintenance of programme and/or project files and the repository of lessons learned on previous projects and programmes. The servicing of programme/ project control boards, project assurance teams and quality review meetings. The analysis of performance and the maintenance of metric data and estimating models. The administration of project change control, including use of configuration management...
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<tr>
<td>I2</td>
<td>Demonstrate the ability to understand and analyze a business problem - collect relevant information, describe and compare options and risks, and make recommendations. Demonstrate appropriate use of relevant techniques such as systems thinking and quantitative analysis.</td>
<td>BLOOM=4</td>
</tr>
<tr>
<td>I3</td>
<td>Demonstrate the ability to analyze a business process, develop the &quot;to-be&quot; design, and then to create the implementation plan and the business change management plan to implement this design.</td>
<td>MSC-C5=FL (Facilitating Change – Plan Change – First Line Manager) MSC-C5=TL</td>
</tr>
<tr>
<td>I4</td>
<td>Demonstrate the ability to design and communicate a moderately complex technology-enabled solution to a business problem.</td>
<td>SFIA-SSUP=4 (Sales Support) Introduction to this Skill: “The provision of technical advice and assistance to the sales force, sales agents, reseller/distributor staff and existing or prospective customers, either in support of customer development or sales activity or in fulfilment of sales obligations.”… “Level 4 Skill Description: Works closely with the sales team to help prospects to clarify their needs and requirements; devises solutions and assesses their feasibility and practicality. Demonstrates technical feasibility using physical or simulation models. Produces estimates of cost and risk and initial project plans to inform sales proposals. Resolves technical problems. “</td>
</tr>
<tr>
<td>I5</td>
<td>Demonstrate understanding of how to analyze a business need, develop an</td>
<td>BLOOM=3</td>
</tr>
<tr>
<td>I6</td>
<td>Demonstrate the ability to examine a new technology, understand its strengths and weaknesses, evaluate its usefulness to solve business problems, and communicate the results.</td>
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**SFIA-RSCH=3 (Research)**  
**Introduction to this Skill:** “The advancement of knowledge in one or more fields of IT by innovation, experimentation, evaluation and dissemination, carried out in pursuit of a predetermined set of research goals. “  
...

**Level 3 Skill Description:** Within given research goals, builds on and refines appropriate outline ideas for research, i.e. evaluation, development, demonstration and implementation. Uses available resources to gain an up-to-date knowledge of any relevant IT field. Reports on work carried out and may contribute sections of material of publication quality. “
## F1-Personal and Interpersonal

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<tr>
<th>Ref</th>
<th>Learning Outcome</th>
<th>Competency Standard</th>
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| F1-1 | Demonstrate self-awareness and self-management, including mastery of ethical reasoning, client relationship management, business courtesies and self-presentation | **MSC-A1=TL** *(Manage your own resources – Team Lead)*  
**MSC-D1=TL** *(Develop productive relationships with colleagues – Team Lead)* |
| F1-2 | Demonstrate proficiency in listening, oral and written communications skills in a business context | **CMC-E** *(the Certified Management Consultant must be able to DEMONSTRATE INTERPERSONAL COMPETENCIES)* |
| F1-3 | Exhibit an understanding of the strengths of a diverse workplace (including ability, ethnicity, religion, gender, sexual orientation, age/generation). | **BLOOM=1** |
| F1-4 | Demonstrate proficiency in working with individuals, including giving and receiving feedback and resolving differences using appropriate negotiation and conflict management skills. | **MSC-D1=TL** *(Develop productive relationships with colleagues – Team Lead)* |
| F1-5 | Demonstrate proficiency in leading work-based teams (within or between organizations), including the ability to:  
  • Persuade, influence, motivate and provide guidance | **MSC-B5=TL** *(Allocate and check work in your team – Team Lead)* |
| F1-5.2 | • Facilitate a range of group innovation, analysis and decision making techniques | MSC-CI=TL (Encourage innovation in your team – Team Lead) |
| F1-5.3 | • Engender and sustain trust | MSC-D1=TL (Develop productive relationships with colleagues – Team Lead) |
| F1-5.4 | • Effectively use technologies to facilitate and support group activities and processes | MSC-E14=TL (Support team and virtual working – Team Lead) |
## F2-Business

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<th>Ref</th>
<th>Learning Outcome</th>
<th>Competency Standard</th>
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<tbody>
<tr>
<td>F2-1</td>
<td>Exhibit an understanding of the history, current role and future trends (e.g. globalization, social responsibility) of business within society and the global economy</td>
<td>BLOOM=1</td>
</tr>
<tr>
<td>I3, I2</td>
<td></td>
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<tr>
<td>F2-2</td>
<td>Demonstrate understanding of business design and business models (e.g. networked, supply chains, open innovation, collaborative ecosystems).</td>
<td>BLOOM=3</td>
</tr>
<tr>
<td>I3, I2</td>
<td></td>
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<tr>
<td>F2-3</td>
<td>Be able to explain the financial, operational, and reputational risk management. Articulate the implications for business decisions of cyclical and event-driven external risks (e.g. credit crunch, pandemics, global warming, peak oil).</td>
<td>BLOOM=2</td>
</tr>
<tr>
<td>I2</td>
<td></td>
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<tr>
<td>F2-4</td>
<td>Exhibit an understanding of various kinds of organizations by industry sector, ownership, governance and size - their business models, key performance factors, dominant structures and processes.</td>
<td>BLOOM=1</td>
</tr>
<tr>
<td>I2</td>
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<tr>
<td>F2-5</td>
<td>Demonstrate understanding of the role, processes and structure of support functions of a business (e.g. general management, marketing, finance, R&amp;D, IT, human resources)</td>
<td>BLOOM=3</td>
</tr>
<tr>
<td>I3</td>
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<tr>
<td>F2-6</td>
<td>Demonstrate understanding of the role, processes and structures of operational functions of a business (e.g. sales, manufacturing, distribution, customer support).</td>
<td>BLOOM=3</td>
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<tr>
<td>I3</td>
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### F3-Technology

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<th>Ref</th>
<th>Learning Outcome</th>
<th>Competency Standard</th>
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<tbody>
<tr>
<td>F3-1</td>
<td>Be able to explain the current and future issues in the following topics:</td>
<td>BLOOM=2</td>
</tr>
<tr>
<td>F3-1.1</td>
<td>• IT operations (e.g. delivery of service levels, change control, green IT)</td>
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<tr>
<td>I6</td>
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<tr>
<td>F3-1.2</td>
<td>• Software development (e.g. methodologies, lifecycle, emerging techniques, usability, in-house vs. off the shelf / total cost of ownership)</td>
<td>BLOOM=2</td>
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<tr>
<td>I6</td>
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<tr>
<td>F3-1.3</td>
<td>• Infrastructure lifecycle (networks, desktop and data centre hardware, operating systems, databases)</td>
<td>BLOOM=2</td>
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<tr>
<td>I6</td>
<td></td>
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<tr>
<td>F3-1.4</td>
<td>• Overall application and technology landscape lifecycle (e.g. make technology choices that will ease the integration of unpredictable future technologies)</td>
<td>BLOOM=2</td>
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<tr>
<td>I6</td>
<td></td>
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<tr>
<td>F3-2</td>
<td>Able to meet business requirements by planning, designing, integrating into an existing landscape, implementing, and operating contemporary technologies in each of the following:</td>
<td>The following competency standards apply to all parts of F3-2</td>
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<tr>
<td></td>
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<td>Requirements: SFIA-REQM=3 (Requirements definition and management)</td>
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<td>Introduction to this Skill: “The definition and management of the business goals and scope of change initiatives. The specification of business requirements to a level that enables effective delivery or agreed changes.”</td>
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</tbody>
</table>
|  |  | “Level 3 Skill Description: Defines scope and business priorities for small-scale changes and may assist in larger scale scoping exercises, Elicits and discovers requirements from operational management and other stakeholders. Selects appropriate techniques for the elicitation of detailed requirements taking into account the nature of the required changes, established practice and the characteristics and culture of those providing the requirements. Specifies and documents business
requirements as directed, ensuring traceability back to source. Analyses them for adherence to business objectives and for consistency, challenging positively as appropriate. Works with stakeholders to prioritise requirements.”

**SFIA-UNAN=3 (Usability requirements Analysis)**
**Introduction to this Skill:** “The establishment, clarification and communication of non-functional requirements for usability (for example, screen design/layout/consistency, response times, capacity). The analysis of the characteristics of users and their tasks, and the technical, organizational and physical environment in which products or systems will operate.”

**“Level 3 Skill Description:** Applies tools and methods to identify the non-functional requirements of users, their characteristics and tasks, and the technical, organizational and physical environment in which the product or system with operate.

**Design**
**SFIA-DESN=3 (Systems design)**
**Introduction to this Skill:** “The specification and design of information systems and their components to meet defined business needs, retaining compatibility with enterprise and solution architecture.”

**“Level 3 Skill Description:** Specifies user/system interfaces, and translates logical designs into physical designs taking account of target environment, performance requirements and existing systems. Produces detailed designs and documents all work using required standards, methods and tools, including prototyping tools where appropriate.”

**Implement**
**SFIA-QUST=3 (Quality standards)**
**Introduction to this Skill:** “The development, maintenance, control and distribution of quality standards.”

**“Level 3 Skill Description:** Controls, updates and distributes new and revised quality standards.”

**SFIA-QUAS=3 (Quality Assurance)**
“The process of ensuring that the agreed quality standards within an organization are adhered to and that best practice is promulgated throughout the
organization.”

“Level 3 Skill Description: Uses appropriate methods and tools in the development, maintenance, control and distribution of quality and environmental standards. Makes technical changes to quality and environmental standards according to documented procedures. Distributes new and revised standards.”

**SFIA-TEST=3 (Testing)**

**Introduction to this Skill:** “The concurrent lifecycle process of engineering, using and maintaining testware (test cases, test scripts, test reports, test plans, etc.) to measure and improve the quality of the software being tested. Testing embraces the planning, design, management, execution and reporting of tests, using appropriate testing tools and techniques and conforming to agreed standards (such as ISO29119), to ensure that new and amended systems, configurations, packages, or services, together with any interfaces, perform as specified.”

“Level 3 Skill Description: Reviews requirements and specifications, and defines test requirements for smaller projects. Creates simple test cases and test scripts. Interprets and executes moderately complex test scripts, mapping back to pre-determined criteria, recording and reporting outcomes. Provides specialist advise to support others. Analyses and reports test activities and results. Identifies and reports issues and risks.”

**Operate**

**SFIA-SLMO=3 (Service level management)**

**Introduction to this Skill:** “The planning, implementation, control, review and audit of service provision, to meet customer business requirements. This includes negotiation, implementation and monitoring of service level agreements, and the ongoing management of operational facilities to provide the agreed levels of service, seeking continually and proactively to improve service delivery.”

“Level 3 Skill Description: Monitors service delivery performance metrics and liaises with managers and customers to ensure the service level agreements are not breached without the stakeholders being given the opportunity of planning for a deterioration in service.”
| F3-2.1 | • A network and computing platform | See above |
| F3-2.2 | • A custom software solution (implemented locally or in the cloud) | See above plus **SFIA-PROG=2 (Programming/software development)**  
**Introduction to this Skill:** “The design, creation, testing and documenting of new and amended programs from supplied specifications in accordance with agreed standards.”  
**“Level 2 Skill Description:** Designs, codes, tests, corrects, and documents simple programs, and assists in the implementation of software which forms part of a properly engineered information or communications system.” |
| F3-2.3 | • A packaged software solution (implemented locally or in the cloud) | See above |
| F3-3 | Demonstrate understanding of the role, management and uses of information, including: | BLOOM=3 |
| F3-3.1 | • The role of information and data to support operations, decision making, planning and risk management |  |
| F3-3.2 | • How to model, prepare, and structure data to support the creation and use of information and knowledge | **SFIA-DTAN=3 (Data analysis)**  
**Introduction to this Skill:** “The investigation, evaluation, interpretation and classification of data, in order to define and clarify information structures which describe the relationships between real world entities. Such structures facilitate the development of software systems, links between systems or retrieval activities.”  
**“Level 3 Skill Description:** Applies data analysis, data modelling, and quality assurance techniques, based upon a detailed understanding of business processes, to establish, modify or maintain data structures and associated components (entity descriptions, relationship descriptions, attribute definitions). Advises database designers and other application development team members on the details of data structures and associated components.”  
**SFIA-DBDS=3 (Database/repository design)**  
**Introduction to this Skill:** “The specification, design and maintenance of mechanisms for storage and access to both structured and unstructured information, in support
of business information needs.”

**Level 3 Skill Description:** Develops specialist knowledge of database concepts, object and data modelling techniques and design principles. Translates object and data models into appropriate database schemas with design constraints. Interprets installation standards to meet project needs and produces database components as required. Evaluates potential solutions, demonstrating, installing and commissioning selected products.”

| F3-3.3 | I4, I6 | Technologies for information management (e.g. reporting, analysis), knowledge management, collaboration management and content management. | BLOOM=3 |
# C1-Technology in Business

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<th>Ref</th>
<th>Learning Outcome</th>
<th>Competency Standard</th>
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<tbody>
<tr>
<td>C1-1</td>
<td>Describe how to optimize the contributions of IT to competitive strategy, innovation, decision-making and operations in various sizes and types of organizations, industry sectors, processes and functions.</td>
<td>BLOOM=3</td>
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<tr>
<td>I4,</td>
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<tr>
<td>C1-2</td>
<td>Describe the impact of IT for individuals, groups, and communities, including culture, social and environmental issues</td>
<td>BLOOM=3</td>
</tr>
<tr>
<td>I4</td>
<td></td>
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<tr>
<td>C1-3</td>
<td>Describe the structure, business value, offerings, and dynamics of the Canadian and international IT industries. This includes the economics of ICTs and specific subsectors (e.g., ERP, open source, outsourcing, web, mobility).</td>
<td>BLOOM=2</td>
</tr>
<tr>
<td>I4, I6</td>
<td></td>
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<tr>
<td>C1-4</td>
<td>Be able to explain the economics and governance of IT and the IT function within organizations, including IT’s role, structure, challenges and career paths.</td>
<td>BLOOM=2</td>
</tr>
<tr>
<td>I4</td>
<td></td>
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</tbody>
</table>
| C1-5 | Demonstrate understanding of the risks and mitigation strategies to business operations inherent in the implementation of information and communications technologies (e.g. systems development, data security and privacy, business continuity, outsourcing, off-shoring and infrastructure). | BLOOM=3  
**SFIA-CORE=3 (Compliance review)**  
**Introduction to this Skill:** “The independent assessment of the conformity of an activity, process, deliverable, product or service to the criteria of specified standards, such as ISO 27001, local standards, best practice, or other documented requirements. May relate to, for example, asset management, network security tools, firewalls and internet security, real-time systems and application design.”  

“**Level 3 Skill Description:** Collects and collates evidence as part of a formally conducted and planned review of the activities, processes, products or services. Examines records as part of specified testing strategies for evidence of compliance with management directives, or the identification of abnormal occurrences.” |

| C1-6 | Demonstrate understanding of and be able to evaluate the choices and activities in procurement and management of purchased IT products and services. | BLOOM=3  
**SFIA-SURE=3 (Supplier relationship management)**  
**Introduction to this Skill:** “On behalf of a client organization, the identification and management of external supplier to ensure successful delivery of products and services to achieve outcomes.”  

“**Level 3 Skill Description** Acts as the routine contact point between organization and supplier. Collects and reports on supplier performance data.” |
## C2-Processes, Projects and Change

<table>
<thead>
<tr>
<th>Ref</th>
<th>Learning Outcome</th>
<th>Competency Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>C2-1</td>
<td>Be able to explain the overall organizational learning and innovation process / life-cycle, and its role in organizational success</td>
<td>BLOOM=2</td>
</tr>
<tr>
<td>I2</td>
<td></td>
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</tbody>
</table>

<p>| C2-2 | Business Process Analysis - demonstrate competence in process analysis using applicable knowledge areas from the International Institute of Business Analysis (IIBA) Business Analysis Body of Knowledge (BABOK). | <strong>SFIA-BUAN=3 (Business analysis)</strong>&lt;br&gt;<strong>Introduction to this Skill:</strong> “The methodical investigation, analysis, review and documentation of all or part of a business in terms of business functions and processes, the information used and the data on which the information is based. The definition of requirements for improving any aspect of the processes and systems and the qualification of potential business benefits. The creation of viable specifications and acceptance criteria in preparation for the construction of information and communication systems.”&lt;br&gt;<strong>Level 3 Skill Description</strong> Investigates operational needs and problems, and opportunities, contributing to the recommendation of improvements in automated and non-automated components of new or changed processes and organization. Assists in defining acceptance tests for these recommendations. |
| I3   |                                                                                                       | <strong>SFIA-BSMO=2 (Business modelling)</strong>&lt;br&gt;<strong>Introduction to this Skill:</strong> “The production of abstract or distilled representations of real world/business situations to aid the communication and understanding of existing, conceptual or proposed scenarios. Predominantly focused around the representation of processes, data, organization and time. Models may be used to represent a subject at varying levels of detail/decomposition.”&lt;br&gt;<strong>Level 2 Skill Description:</strong> Understands the purpose and benefits of modelling. Uses established techniques as directed to model simple subject areas with clearly-defined boundaries. May assist in more complex modelling activities. Develops models with input from subject matter experts and communicates the results back to them for review and confirmation.” |</p>
<table>
<thead>
<tr>
<th>C2-3</th>
<th>Project Management - demonstrate appropriate understanding of the <a href="https://www.pmi.org">Project Management Institute’s Project Management Body of Knowledge (PMBOK)</a></th>
</tr>
</thead>
</table>

**SFIA-PRMG=4 (Project management)**

“The management of projects, typically (but not exclusively) involving the development and implementation of business processes to meet identified business needs, acquiring and utilizing the necessary resources and skills, within agreed parameters of cost, timescales and quality.”

**“Level 4** Defines, documents and carries out small projects (typically less than six months, with a small team, limited budget, no interdependency with other projects, and no significant strategic impact, actively participating in all phases. Identifies, assesses and manages risks to the success of the project. Prepares realistic project and quality plans and tracks activities against the plans, providing regular and accurate reports to stakeholders as appropriate. Monitors costs, timescales and resources used, and takes action where these deviate from agreed tolerances. Ensures that own projects are formally closed and, where appropriate, subsequently reviewed, and that lessons learned are recorded.”

**SFIA-PROF=4 (Programme and Project Support Office)**

**Introduction to this Skill:** “The provision of support and guidance on programme and project management processes, procedures, tools and techniques to programme and project managers and their teams. The use of project management software. The development, production and maintenance of time, resource, cost and exception plans. The tracking and reporting of progress and performance of projects (including those performed by third parties). The maintenance of programme and/or project files and the repository of lessons learned on previous projects and programmes. The servicing of programme/ project control boards, project assurance teams and quality review meetings. The analysis of performance and the maintenance of metric data and estimating models. The administration of project change control, including use of configuration management systems.”

…

**“Level 4 Skill Description:** Takes responsibility for the provision of Project Office Services to a small project. Uses and recommends project control solutions for planning, scheduling and tracking projects. Sets up and provides detailed guidance on project management software, procedures, processes, tools and techniques. Supports programme or project control boards, project assurance teams and quality review meetings. Provides basic guidance on individual project proposals. May be involved in some aspects of supporting a programme by providing a cross programme view on risk, change, quality, finance or configuration management.”
| C2-4  | Business Change Management - demonstrate understanding and application of best practices in organizational change management | BLOOM=3 |
Appendix A: Details and background on Competency Standards

Defining competency standards vs. providing guidance

The definition of the BTM is forward looking, and ITAC Talent wanted to leverage professional competency models as fully as possible to describe competency requirements in version 1.0 of the BTM. However, some professional models are not yet mature enough to provide a competency standard whose achievement can be tested and measured.

We have used these less mature models to provide guidance – i.e. the model, in general terms, is directionally aligned with employer needs but lacks sufficient detail to be used to set a specific competency standard.

Later versions of the BTM learning outcomes and competency standards will use improved versions of the professional bodies’ models as these become available.

Overview of professional body models

1. **SFIA**. Provides the largest number of “doing” competency standards, mostly in the Technology knowledge area.
   
   A later version of the learning outcomes may use a Canadian equivalent \(^3\) should one become available.
   
   For specific learning outcomes, specific SFIA skills are referenced for guidance.

2. **PMI**. PMI competency models are not used to define specific competency standards for individual learning outcomes. This is because they are built from the perspective of a certified project manager (i.e. an individual holding the PMP designation) – above the expected maturity of competency of a BTM graduate.

   The PMI does have a junior certification, the **Certified Associate in Project Management (CAPM)**. The CAPM certification demonstrates an understanding of the fundamental knowledge, processes and terminology of project management (see PMBOK and PMBOK Guide) that are needed for effective project management performance. CAPM is a standard that BTM graduates can realistically attain.

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\(^3\) Three approaches to defining maturity of competency are currently taken by industry bodies:

- Skill by skill (e.g. the UK based – SFIA and MSC)
- Role by role (e.g. the Canadian based Information and Communications Technology Council - ICTC ICT Competency Profiles Framework)
- Discipline by discipline (e.g. the UK based e-skills PROCOM. Built on IT professional National Occupational Standards, PROCOM defines knowledge, understanding and competencies for seven broad disciplines (and their sub-disciplines) at five levels of progression, incorporating technical, business and personal skills. e-skills PROCOM Overview and Diagram

The skill by skill approach has been found to be more flexible and maintainable by the professional bodies themselves, and most have plans to move in this direction, if they don’t already take this approach. Further, from a BTM perspective, it is much easier to map skills, rather than the positions (aka rungs on the career ladders) to individual learning outcomes. For this reason skill by skill models from elsewhere are being used to define the competency standards at this time, even if a Canadian model exists covering the same professional domain.
We recommend that BTM students who have an interest in project management write the CAPM examination during their final year of study. This will illustrate their commitment to the project management to potential employers.

CAPM spans multiple learning outcomes in the Personal and Interpersonal, Process, Projects and Change and Integrative Knowledge areas. PMI-CAPM is indicated on the applicable learning outcomes.

The following PMI documents / sections of documents have been consulted for BTM learning outcomes and competency standards:

- PMBOK and PMBOK Guide
- PMCDF (especially chapters 2 and 3 that define professional and personal competency requirements for project management)
- PMI PathPro Job Ladder Title Project Manager I (the most junior level)

These PMI documents span the same learning outcomes as CAPM. As guidance PMI-PMCDF, PMI-BABOK, and PMI-Project Manager I is indicated on the applicable learning outcomes.

3. **IIBA.** At this time the IIBA Career Ladder does not define specific competency standards.

However, the IIBA Business Analysis Body of Knowledge (BABOK) in general, the BABOK Chapter 8 - Underlying Competencies, and the definition of the Business Analysis role (the most junior) on the Business Analysis Career ladder have been consulted during the development of the learning outcome and competency standards.

We strongly recommend these be consulted for guidance on the meaning of, and competency requirements for the relevant learning outcomes.

As the IIBA Career Ladder and associated skills and competency models mature, subsequent versions of BTM learning outcomes will define competency standards based on these refined models.

4. **CMC.** At this time the CMC Competency Profile and CMC Competency Framework Summary is not used to define specific competency standards. This is because they are built from the perspective of a certified management consultant (CMC) – above the expected maturity of competency of a BTM graduate.

The CMC Common Body of Knowledge (CMCBOK) has been consulted during the development of the learning outcomes and competency standards, along with the CMC Competency Profile and CMC Competency Framework Summary.

We recommend these be consulted for guidance on the meaning of, and competency requirements for the relevant learning outcomes.

Should the CMC extend their models to include “junior” management consultants (or perhaps a management consultant equivalent to the PMI CAPM), applicable parts of this model will be used in subsequent versions of the learning outcomes to define competency standards.

5. **MSC.** Used to define “doing” competency standards in the Personal and Interpersonal and Integrative knowledge areas.
A later version of the learning outcomes may use a Canadian equivalent should one become available.

The National Occupational Standards (NOS) for Management and Leadership has been consulted during the development of the learning outcomes and competency standards. We recommend this be consulted for guidance on the meaning of, and competency requirements for the relevant learning outcomes.

Details of Professional Bodies’ Models use to Define Competency Standards
The following describes, for those professional bodies whose models are used to define competency standards (not guidance), how each model is specifically used.

Skills Framework for the Information Age
The SFIA model defines 7 skill levels and provides detailed descriptions of the applicable skill levels for each of approximately 100 skills grouped into 6 categories. 20 of these skills, from all 6 of the categories, are used to define competency standards.

The skill level selected to define the competency standard varies by skill – but is always towards the junior end of the 7 levels (e.g. 2 – assist, 3 – apply, 4 – enable).

For a learning outcome with a SFIA related competency standard the SFIA 4 character skill code (e.g. DTAN for Data Analysis, PROG for Programming) is quoted along with the required skill level number.

For example SFIA-BSMO=3 should be taken to mean that competence in a learning outcome can be demonstrated by achieving level 3 (Apply) of the SFIA framework in Business Modelling (BSMO).

In future versions of the learning outcomes and competency standards it may be possible to provide for student specialization within the overall BTM framework.

Certified Management Consultants of Canada
The CMC Competency Profile and associated CMC Competency Framework Summary model defines 43 skills grouped into 6 aspects, at a single skill level (Certified Management Consultant). The CMC competency model is provides guidance for one learning outcome.

For this learning outcome the relevant CMC Competency Profile Aspect (i.e. E – Demonstrating Interpersonal Competencies) is quoted.

4 In the UK ITMB Learning Outcomes and Competency Standards the following is used to create the requirement for student specialization. We welcome feedback from employers and educators on the need for and doability of a similar requirement in the BTM learning outcomes and competency requirements

Have acquired competence in two chosen fields, in any SFIA category, in the Business, Technology and Project themes, up to level 4 (ENABLE) of the seven level SFIA framework.

The following SFIA fields are applicable:

- Strategy and Architecture – IRMG, SCTY, UNAN, ICPM, RSCH, COPL, METL
- Business Change – PRMG, BUAN, BPTS, BSMO
- Solution Development and Implementation – DTAN, REQM, DESN, DBDS, PROG, SFEN, INCA, TEST, HCECV, UNAN, USEV, SINT, PORT, HSIN
- Service Management – FMIT, CPMG, AVMT, SLMG, CFMG, CHMG, RELM, SYSP, SCAD, RFEN, ASUP, ITOP, NTO, DBAD, NTAS, PBMG, USUP
- Procurement and Management Support – SURE, QUAS, QUST, CORE, TAUD, PROF, ASMG, TMCR, ETDL
- Client Interface – MKTG, SALE, SSUP

4
CMC-E should be taken to mean that guidance on the competence requirement may be found in Aspect 6, Demonstrating Interpersonal Competencies, of the CMC Competency Profile and associated CMC Competency Framework Summary.

**Management Standards Centre**
The MSC National Occupational Standards (NOS) model defines 6 broad skill sets (from junior to senior) and provides detailed descriptions of the applicable skill sets for each of approximately 74 skills (known as units). 5 of these skills are used to define competency standards.

The skill level selected to define the BTM competency standard varies – but is always towards the junior end of the 6 broad skills sets (e.g. 1 – Team Leader or 2 – First Line Manager).

For a learning outcome with a MSC NOS related competency standard the NOS 2 character skill code (e.g. A1 for Manage Your Own Resources) is quoted along with the required skill set (e.g. TL for Team leader, or FL for First Line Manager).

For example MSC-A1=TL should be taken to mean that competence in a learning outcome can be demonstrated by achieving Team Leader of the MSC NOS skill Manage Your Own Resources (A1).
Appendix B: Integrative Outcomes – In-depth

*Integrative Objective 1: Project Management*

Demonstrate the ability to plan, manage and lead a business technology project.

**Foundation knowledge:**

F1-3 Understand (Recognize) the strengths of a diverse workplace (including ability, ethnicity, religion, gender, sexual orientation, age/generation). BLOOM=1

C2-1 Analyse and evaluate (Be able to explain) the Project Management Institute's Project Management Body of Knowledge (PMBOK) Bloom3 (2)

**Demonstrated abilities:**

F1-2 Demonstrate proficiency in listening, oral and written communications skills in a business context.

F1-4 Demonstrate proficiency in working with individuals, including giving and receiving feedback and resolving differences.

F1-5 Demonstrate proficiency in leading work-based teams including the ability to:

F1-5.1 Persuade, influence, motivate and provide guidance.

F1-5.2 Facilitate a range of group innovation, analysis and decision making techniques.

F1-5.3 Engender and sustain trust.

F1-5.4 Effectively use technologies to facilitate and support group activities and processes.

PMI-PMCDF (Ch 3-6.1)
Participate in and lead small projects incorporating where possible the activities outlined in PMI-PMCDF.

**Operational Guidance – Evaluation Criteria**

PMI-PMCDF used as a guide for structuring student projects. Student projects incorporate, to the extent possible, the components identified in PMI-PMCDF.
**Integrative Objective 2: Business Problem Analysis**

Demonstrate the ability to understand and analyze a business problem, collect relevant information, describe and compare options and risks, and make recommendations. Demonstrate appropriate use of relevant techniques.

**Foundation knowledge:**

F2-1: Understand (Recognize) the history, current role and future trends (e.g. globalization, social responsibility) of business within society and the global economy. BLOOM=1

F2-2: Analyse and evaluate (Be able to explain) business design and business models (e.g. networked, supply chains, open innovation, collaborative ecosystems). BLOOM=3 (2)

F2-3: Be able to explain the financial, operational, and reputational risk management. Articulate the implications for business decisions of cyclical and event-driven external risks (e.g. credit crunch, pandemics, global warming, peak oil). BLOOM=2

F2-4: Understand (Recognize) various kinds of organizations by industry sector, ownership, governance and size - their business models, key performance factors, dominant structures and processes. BLOOM=1

F3-3.1: Analyse and evaluate (Be able to explain) the role of information and data to support operations, decision making, planning and risk management. BLOOM=3 (2)

C2-1: Be able to explain the overall organizational learning and innovation process / life-cycle, and its role in organizational success. BLOOM=2

**Demonstrated abilities:**

CMC-E
Demonstrate proficiency in listening, oral, and written communications skills in a business context

**Operational Guidance – Evaluation Criteria**

Students perform business problem analysis using case studies or industry live case.
Integrative Objective 3: Business Process Analysis

Demonstrate the ability to analyze a business process, develop the "to be" design, and create the implementation plan and the business change management plan to implement this design.

Foundation knowledge:

F2-1: Analyse and evaluate (Be able to explain) business designs and business models (e.g. networked, supply chains, open innovation, collaborative ecosystems). BLOOM=3 (2)

F2-2: Understand (Recognize) various kinds of organizations by industry sector, ownership, governance and size - their business models, key performance factors, dominant structures and processes. BLOOM=1

F2-5: Analyse and evaluate (Be able to explain) the role, processes and structure of the support functions of a business (e.g. general management, marketing, finance, R&D, IT, human resources). BLOOM=3 (2)

F2-6: Analyse and evaluate (Be able to explain) the role, processes and structures of operational functions of a business (e.g. sales, manufacturing, distribution, customer support). BLOOM=3 (2)

C2-1: Be able to explain the overall organizational learning and innovation process / life-cycle, and its role in organizational success BLOOM=2

C2-2: (Be able to explain) applicable knowledge areas from the International Institute of Business Analysis (IIBA) Business Analysis Body of Knowledge (BABOK). (BLOOM 2)

C2-4: Analyse and evaluate (Be able to explain) best practices in organizational change management BLOOM=3 (2)

Demonstrated abilities:

SFIA-BUAN (Business analysis) Level 3

- Investigates operational needs and problems, and opportunities,
- Recommends improvements in automated and non-automated components of new or changed processes and organization,
- Defines acceptance tests for these recommendations.

SFIA-BSMO (Business modelling) Level 2

- Understands the purpose and benefits of modelling.
- Uses established techniques as directed to model simple subject areas with clearly defined boundaries.
- Develops models with input from subject matter experts and
- Communicates the results back to them for review and confirmation. ”

Operational Guidance – Evaluation Criteria
Students analyze and re-engineer and plan implementation and change management using case studies or industry live case.
Integrative Objective 4: Design Solutions
Demonstrate the ability to design and communicate a moderately complex technology-enabled solution to a business problem.

Foundation knowledge:

C1-1 Analyse and evaluate (Be able to explain) how to optimize the contributions of IT to competitive strategy, innovation, decision-making and operations in various sizes and types of organizations, industry sectors, processes and functions. BLOOM=3 (2)

C1-2 Analyse and evaluate (Be able to explain) the impact of IT for individuals, groups, and communities, including culture, social and environmental issues. BLOOM=3 (2)

C1-3 Be able to explain the structure, business value, offerings, and dynamics of the Canadian and international IT industries. This includes the economics of ICTs and specific subsectors (e.g., ERP, open source, outsourcing, web, mobility). BLOOM=2

C1-4 Be able to explain the economics and governance of IT and the IT function within organizations, including IT’s role, structure, challenges and career paths. BLOOM=2

C1-5 Analyse and evaluate (Be able to explain) the risks and mitigation strategies to business operations inherent in the implementation of information and communications technologies (e.g. systems development, data security and privacy, business continuity, outsourcing, offshoring and infrastructure). BLOOM=3 (2)

F3-3.1: Analyse and evaluate (Be able to explain) the role of information and data to support operations, decision making, planning and risk management. BLOOM=3 (2)

F3-3.3: Analyse and evaluate (Be able to explain) technologies for information management (e.g. reporting, analysis), knowledge management, collaboration management and content management. BLOOM=3 (2)

Demonstrated abilities:

SFIA-CORE (Compliance review) Level 3
• Collects and collates evidence as part of a formally conducted and planned review of the activities, processes, products or services.
• Examines records as part of specified testing strategies for evidence of compliance with F3-3.2 Model, prepare, and structure data to support the creation and use of information and knowledge

SFIA-DTAN (Data analysis) Level 3
• Applies data analysis, data modelling, and quality assurance techniques, based upon a detailed understanding of business processes, to
• Establishes, modifies or maintains data structures and associated components (entity descriptions, relationship descriptions, attribute definitions).
• Advises database designers and other application development team members on the details of data structures and associated components.”
**SFIA-DBDS (Database/repository design) Level 3**
- Develops specialist knowledge of database concepts, object and data modelling techniques and design principles.
- Translates object and data models into appropriate database schemas with design constraints.
- Interprets installation standards to meet project needs and produces database components as required.
- Evaluates potential solutions, demonstrating, installing and commissioning selected products.

**MSC-A1=TL (Manage your own resources – Team Lead)**
**MSC-D1=TL (Develop productive relationships with colleagues – Team Lead)**

Demonstrate:
- self-awareness and self-management,
- mastery of ethical reasoning,
- client relationship management,
- business courtesies and
- self-presentation.

**CMC-E**
Demonstrate proficiency in listening, oral, and written communications skills in a business context

**Operational Guidance – Evaluation Criteria**
**Students design and communicate proposed solutions to problem analysis or process analysis results using case studies or Industry live case.**
**Integrative Objective 5: Acquire Technology Solutions**

Analyse and evaluate (Be able to explain how to) analyze a business need, develop an RFx, evaluate the responses, and structure a contract with the successful vendor.

**Foundation knowledge:**

I5: Analyse and evaluate (Be able to explain) how to evaluate the effectiveness, appropriateness and usability of an implemented information system BLOOM 3 (2)

C1-6: Analyse and evaluate (Be able to explain) the choices and activities in procurement and management of purchased IT products and services. BLOOM=3 (2)

**Demonstrated abilities:**

SFIA-SURE (Supplier relationship management) Level 3
- Collects and reports on supplier performance data.

**Operational Guidance – Evaluation Criteria**

Students identify and evaluate potential suppliers as part of sector analysis or in relation to proposed solutions to problem analysis or process analysis results using case studies or Industry live case.
Integrative Objective 6: Evaluate New Technologies
Demonstrate the ability to examine a new technology, understand its strengths and weaknesses, evaluate its usefulness to solve business problems, and communicate the results.

Foundation knowledge:
C1-3 Be able to explain the structure, business value, offerings, and dynamics of the Canadian and international IT industries. This includes the economics of ICTs and specific subsectors (e.g., ERP, open source, outsourcing, web, mobility). BLOOM=2

F3-1 Be able to explain the current and future issues in the following topics:
F3-1.1: IT operations (e.g. delivery of service levels, change control, green IT) BLOOM=2

F3-1.2: Software development (e.g. methodologies, lifecycle, emerging techniques, usability, in-house vs. off the shelf / total cost of ownership) BLOOM=2

F3-1.3: Infrastructure lifecycle (networks, desktop and data centre hardware, operating systems, databases) BLOOM=2

F3-1.4: Overall application and technology landscape lifecycle (e.g. make technology choices that will ease the integration of unpredictable future technologies) BLOOM=2

F3-3.3: Analyse and evaluate (Be able to explain) technologies for information management (e.g. reporting, analysis), knowledge management, collaboration management and content management. BLOOM=3 (2)

C1-5 Analyse and evaluate (Be able to explain) the risks and mitigation strategies to business operations inherent in the implementation of information and communications technologies (e.g. systems development, data security and privacy, business continuity, outsourcing, offshoring and infrastructure). BLOOM=3 (2)

Demonstrated abilities:
SFIA-RSCH (Research) Level 3
• Builds on and refines appropriate outline ideas for research, i.e. evaluation, development, demonstration and implementation.
• Uses available resources to gain an up-to-date knowledge of any relevant IT field.
• Reports on work carried out and may contribute sections of material of publication quality.

MSC-A1=TL (Manage your own resources – Team Lead)
MSC-D1=TL (Develop productive relationships with colleagues – Team Lead)
Demonstrate:
• self-awareness and self-management,
• mastery of ethical reasoning,
• client relationship management,
• business courtesies and
• self-presentation.

CMC-E
Demonstrate proficiency in listening, oral, and written communications skills in a business context

Operational Guidance – Evaluation Criteria
Students identify and evaluate potential technologies as part of sector analysis or in relation to proposed solutions to problem analysis or process analysis results using case studies or Industry live case.
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