



Mining and Metallurgical Society of America

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MMSA's Continuing Professional Development Program

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The Mining and Metallurgical Society of America has adopted a Continuing Professional Development (CPD) program. All MMSA QP members must participate in an acceptable CPD program. However, MMSA's program is easy to use and the MMSA CPD Log will be accepted as evidence of CPD by other professional organizations, including AIPG and AusIMM (Abbott, 2019). Retired QP members do not have to comply with the CPD requirements as long as they are retired from professional practice. If you want to be able to contribute to the occasional professional report, then you should keep up with the CPD program.

MMSA's program has been developed because MMSA believes that it may not be long before participation in a verified CPD program will be a requirement for those seeking qualified person (or competent person) status for NI 43-101 reports or other CRIRSCO-Template reports. MMSA's CPD program is based on a calendar year of January 1st through December 31st.

The purpose of a CPD program is providing a mechanism allowing the recording or logging of CPD activities engaged in by participating professionals and providing for a professional organization's monitoring of that participation. The CPD program should be easy for participating professionals to use on a regular basis (Abbott, 2019). Insisting on the use of a particular reporting form is irrelevant. What is relevant is the evidence that CPD has been undertaken by the reporting participant. MMSA's CPD reporting log should satisfy most CPD programs. And MMSA will accept the reporting log used by another professional organization as long as that log demonstrates that required number of CPD hours, including ethics hours, are recorded in the log submitted.

The advantages of MMSA's CPD LogV9 are:

- generally accepted definitions of main CPD activities
- records or logs contact hours rather than points, etc.
- ease of logging on a daily basis in a personally maintained standard worksheet or table
- provides a 3-year summary of CPD activity; a 3-year reporting period allows participating professionals more flexibility in meeting CPD hour requirements.
- contains no weighting, points, maximum amounts, or other factors suggesting that one main CPD activity is more important than another
- provides a good summary of the variety of CPD activities undertaken
- provides a means of logging professional ethics hours; a requirement for ethics should be part of all CPD programs

CRIRSCO-Template reports are prepared in compliance with one of the organizations that complies with the CRIRSCO Template.

The calendar year reporting period could change if the number of CPD logs to be assessed each year becomes too large, at that time, the program may change to a year based on birth month.

The listed attributes of an ideal CPG log are based in part on the GSL program (2017a, §4).

The author uses Microsoft's OneNote program for his daily CPD log. Evernote™ is a similar free program. The data from the daily log is easily copied into a spreadsheet for final CPD logging and reporting via file upload.

The GSL program formerly used a point system that weighted various main CPD activities. This system was abandoned in 2017 (GSL 2017a, §2.11). If maximum limits are placed on particular main CPD activities—not recommended—the limit should be on a percentage of total CPD hours basis not on a fixed number of hours.

- the completed annual log and other relevant documents/files can be uploaded to a professional organization's central repository for CPD records using standard software and file formats; the uploaded files can be reviewed for compliance with the CPD program's requirements.
- the completed annual log should be acceptable evidence of CPD for all similar professional organizations

1. Definition of Continuing Professional Development (CPD)

Continuing professional development (CPD) (also known as Professional Development (PD)) is defined as:

Continuing Professional Development (CPD) is the systematic maintenance, improvement, and broadening of professional knowledge and skills, and the development of personal qualities necessary for carrying out professional and technical duties throughout a working life. CPD is an organized way for professionals to maintain and develop the standards of technical and professional competence required for their work. As well as broadening participating professionals' knowledge, CPD gives assurance to their employers, and to society in general, that they are maintaining their professional competence.

Active professional practice or work activities are known to be a significant factor in maintaining and improving skills. To count as CPD, the work activity must extend beyond carrying out routine tasks or using existing skills or knowledge. Examples include improving and/or contributing to professional knowledge (e.g. technical or regulatory publications and presentations or studies) and developing new technical skills (techniques, data analysis, modelling, etc.). Maintenance of existing skills and knowledge through periodic refresher courses also counts as CPD.

Different CPD programs disagree on whether to allow CPD credit for professional practice and, if so, how to meld professional practice and CPD hours. The second paragraph of the suggested definition of CPD effectively deals with this issue by recognizing that some professional work activities can qualify as CPD and providing examples of the types of activities that qualify. These activities can be logged using the main CPD activity descriptions and this eliminates the need to separately log professional practice. See Appendix 1 for a more detailed discussion of the professional practice conundrum.

2. MMSA's CPD Program

MMSA's CPD program is based on a review of the CPD programs of several professional organizations including the programs of the:

- American Institute of Professional Geologists (AIPG), 2019
- Association of Professional Engineers and Geologists of British Columbia (APEGBC), 2011
- Association of Professional Geologists of Ontario (APGO), 2016
- Australasian Institute of Mining and Metallurgy (AusIMM), 2018
- European Federation of Geologists (EFG), 2018
- Geological Society of London (GSL) for Chartered Fellows, 2017
- Mining & Metallurgical Society of America (MMSA), 2017
- Society of Mining, Metallurgy, and Exploration Registered Member program (SME RM), 2015

MMSA's CPD program is based on logging a minimum total of 150 CPD hours for each QP endorsement over a 3-year rolling average, or an average of 50 CPD hours per year per QP endorsement. As more fully discussed in the FAQ file (MMSA CPD FAQsV5.docx) some CPD activities will count as credit for more than one QP endorsement area. For example, a geologist with QP endorsements for geology and ore reserves who reported 256 hours in geology and 195

Based in part on the GSL program (2017a, §2.1)).

hours in ore reserves over a 3-year period would meet the meet the 150-hour requirement for both QP endorsements. At least 3 CPD activity hours of professional ethics must be reported every three years. Ethics is not reported in a separate category, but the time is included in other activities, such as reading an article, listening to a lecture or webinar, or writing on professional ethics.

No maximum number of total CPD activity hours is imposed. CPD reporting can include many more hours above the 50 hours per year minimum requirement for each QP endorsement. Some CPD programs impose capping the number (or better, percentage) of hours that can be credited for such main activity areas as Skill Enhancement, Private Reading, and/or Service to Industry (or their equivalents). This is because, as noted at the end of the “What are CPD Hours?” section of the FAQs for the CPD program, experience has shown that a particular activity could be counted in two or more of the Main CPD Activity areas. Pick a category; the summary of the CPD activity should let CPD reviewers/auditors know what you were doing.

The MMSA CPD LogV9, while recommended, is not mandatory for use by MMSA members. If an MMSA member prefers to use a form from another professional entity such as those of AIPG, AusIMM, etc., that is acceptable as long as it meets MMSA’s minimum hour requirements. Regular MMSA Members may voluntarily participate.

3. The Main CPD Activity Areas

Mining industry professionals work in widely varied jobs and at all levels of responsibility and their CPD needs will be equally varied. Generally, CPD activities include (GSL, 2017a, §2.7):

- ◆ Developing technical knowledge, experience, and skills in their current field(s).
- ◆ Broadening technical knowledge, experience and, skills into fields parallel to their own, thus enabling them to move into another job should the desire, need, or opportunity arise.
- ◆ Acquisition of non-technical knowledge, experience, and skills, such as: management techniques; communication and presentational skills; legal and regulatory issues; finance; foreign languages; etc. thus preparing participants to assume wider or greater responsibilities when the opportunities arise.

The following list of Main CPD Activity areas and the associated 2-letter code for each main activity are used in MMSA’s CPD LogV9.

FE: Formal education (tested and untested) classes lasting ≥ 4 hours. Report the hours spent in classes and labs as well as hours spent in study and research.

SC: Short Courses and webinars (external and internal) as a participant; variable lengths and can be several days. The courses can be technical or courses with a mining or related theme run by commercial organizations, and do not have to be taken for credit. Report the hours spent in the short courses and webinars.

CM: Conferences & Meetings: technical conferences and professional society meetings and field trips report the hours spent in conferences, meetings, and field trips. Participation in the organizing committee for a meeting, conference, or field trip could be logged as CM or SI.

CK: Contributing to knowledge including preparing or updating publications, presentations (and peer review thereof), and technical courses or lectures; reading and research done in connection with preparing or updating a publication, presentation, technical course, etc. CK can include hours spent creating and leading field trips.

SE: Skill Enhancement or Maintenance can include courses or meetings needed to meet or maintain required regulatory safety, certification, operations, and other programs. For example, the courses could include company, MSHA, or EPA training; first aid courses, computer software training, etc.

PR: Private Reading: self-directed private reading professional journals, books, and similar publications. You may also report reading to support ancillary professional skills like computing skills.

Abbott, 2019, discusses the problems with capping maximums and other Main CPD Activity area limits.

SI: Service to Industry including hours spent on society committee meetings or work, public outreach activities, etc.

OT: Other types of CPD including mentoring, foreign language study, etc.; describe what was done.

CPD activities come in many varieties that can be accommodated within the foregoing 8 Main CPD Activity areas list. MMSA's CPD Activity Lookup Table contains a wide variety of CPD activities and suggests appropriate Main CPD Activity codes. MMSA's **CPD look-up table.xlsx** contains a lengthy list of CPD activities with associated potential main CPD activity codes to assist in selecting an activity code. Some activities have more than one main CPD activity area suggestion. This reflects the fact that the main CPD activity list is necessarily an artificial and imperfect grouping, that there are other equally valid ways of 'slicing the cake.' MMSA's **CPD look-up table.xlsx** is periodically updated, which includes a review of the look-up tables used by other CPD programs.

4. Distribution Among Main CPD Activity Areas

Although weighting of main CPD activities should not be used, a participant's CPD should be spread among the main CPD activity areas. Some main CPD activities may be more commonly used than others. For example, formal education and mentoring may not be as frequently logged. The expense of going to multi-day society meetings may limit attendance frequency even though meetings can result in many CPD hours. Nevertheless, CPD assessment/auditing programs frequently look for a distribution of CPD spread over several main CPD activity areas. While the choice of the main CPD activity used for a particular activity can substantially affect the time percentage distribution between activities a distribution is desirable. CPD programs that use a 3-year rolling average CPD reporting log are more likely to have better distribution of hours between main CPD activities and for this reason are recommended.

5. Audit or Review of CPD Logs

An audit or review program of participating member's CPD logs is the verification part of MMSA's CPD program. Once MMSA's CPD program is fully implemented, a random number of participating members will be selected for audit each year. However, once a participating member's 3-year CPD Log has been reviewed and approved, that participating member will not be audited for a succeeding 3-year period. Further, every participating member will be audited at least once every 7 years. The details of the **CPD Audit Procedures** are contained in a separate document.

If an audit determines that a participating member is short on approved hours, the participating member will have a period of time to bring the reported CPD hours to the minimum required.

6. References

- Abbott, David M., Jr., 2019, Suggestions for moving toward an internationally recognized ideal CPD program: Mining Engineering web exclusive, July 1, 2019, 8 p., <http://me.smenet.org/reader.cfm?webArticleID=2702>; see also <https://youtu.be/e7UJemTNfFA>, 31 minutes.
- APEGBC, 2011, Association of Professional Engineers and Geoscientists of British Columbia continuing professional development guidelines: <https://www.egbc.ca/getmedia/a85a6b91-8a76-4e85-8795-8ebdf2decfd1/APEGBC-Continuing-Professional-Development-Guideline.pdf.aspx>, 24 p.
- APGO, 2016, Association of Professional Geoscientists of Ontario: <https://www.apgo.net/about/professional-practice>, 2 p.
- AusIMM, 2018, Chartered Professional Guideline 5: professional development (PD) requirements: <https://ausimm.com/wp-content/uploads/2018/10/chartered-professional-regulations-guidelines2-2018v2.pdf>, 6 p.
- CRIRSCO template, 2013: <http://www.crirSCO.com/template.asp>.

Some professional organizations have formal mentoring programs and include mentoring as a main CPD activity, others, including MMSA, do not. Mentoring activity, whether formal or informal counts as professional development.

MMSA's CPD Activity Look-Up Table is based in part on the GSL's CPD Category Lookup from Activities table (2017c).

European Federation of Geologists, 2018, Regulation E6, ver 5, Continuing professional development: https://eurogeologists.eu/wp-content/uploads/2015/08/a_Reg-E1-Ver-6-Dec-2011.pdf, 8 p.

———, 2018, <https://eurogeologists.eu/efg-council-approves-revised-cpd-scheme/>.

Geological Society of London (GSL), 2017a, The Geological Society’s new CPD system: <https://www.geolsoc.org.uk/membership/CPD-scheme/Information-and-Help>.

———, 2017b, Mind Map: <https://www.geolsoc.org.uk/~media/shared/documents/CPD/CPD%202017/CPD%20Mind%20Map%20-%202017%2001%2012.pdf?la=en>.

———, 2017c, Guidelines for completing a compliant CPD record: <https://www.geolsoc.org.uk/~media/shared/documents/CPD/CPD%202017/Guidelines%20for%20Completing%20a%20Compliant%20CPD%20Record%20v70%20%20%20JCST%20%202017%2001.pdf?la=en>.

JORC Code “Recognised Professional Organizations”, 2012: <http://www.jorc.org/competent.asp>.

MMSA, 2017, Mining & Metallurgical Society of America, Continuing professional development: <http://mmsa.net/>.

Society for Mining, Metallurgy, & Exploration (SME), 2015, Continuing education requirements for Registered Members of SME: http://www.smenet.org/SME/media/RegisteredMember/15-01-30_ContinuingProfessionalDevelopmentforRegisteredMembers.pdf.

7. Appendix 1: The Professional Practice Conundrum

“Professional practice” is the main CPD area category with the most variations in meaning between programs. Active professional practice or work activities are known to be a significant factor in maintaining and improving one’s professional skills. But to count as CPD, the work activity must extend beyond carrying out routine tasks or using existing skills or knowledge. Examples include improving knowledge (e.g. technical or regulatory publications and presentations or studies) and developing new technical skills (techniques, data analysis, modelling, etc.). Maintenance of existing skills and knowledge through periodic refresher courses also should count as CPD.

While logical and laudable, the addition of professional practice hours to CPD programs presents two problem areas that have not been thoroughly thought out by the CPD programs advocating inclusion of professional practice in their programs: 1) the definition of professional practice (what hours are counted) and 2) how should the professional practice hours be melded into traditional CPD programs in a manner that neither gives too much nor too little weight to professional practice hours. However, because of these two reasons, the way in which professional practice hours were combined with other main CPD activities was left unresolved.

The Geological Society of London’s (GSL) Mind Map (2017b) is a graphic showing how various activities fit within the GSL’s overall CPD program. Figure 1 is the part of the Mind Map showing the GSL’s “Professional practice” main CPD activity and the variety of activities contained within the GSL’s classification of professional practice.

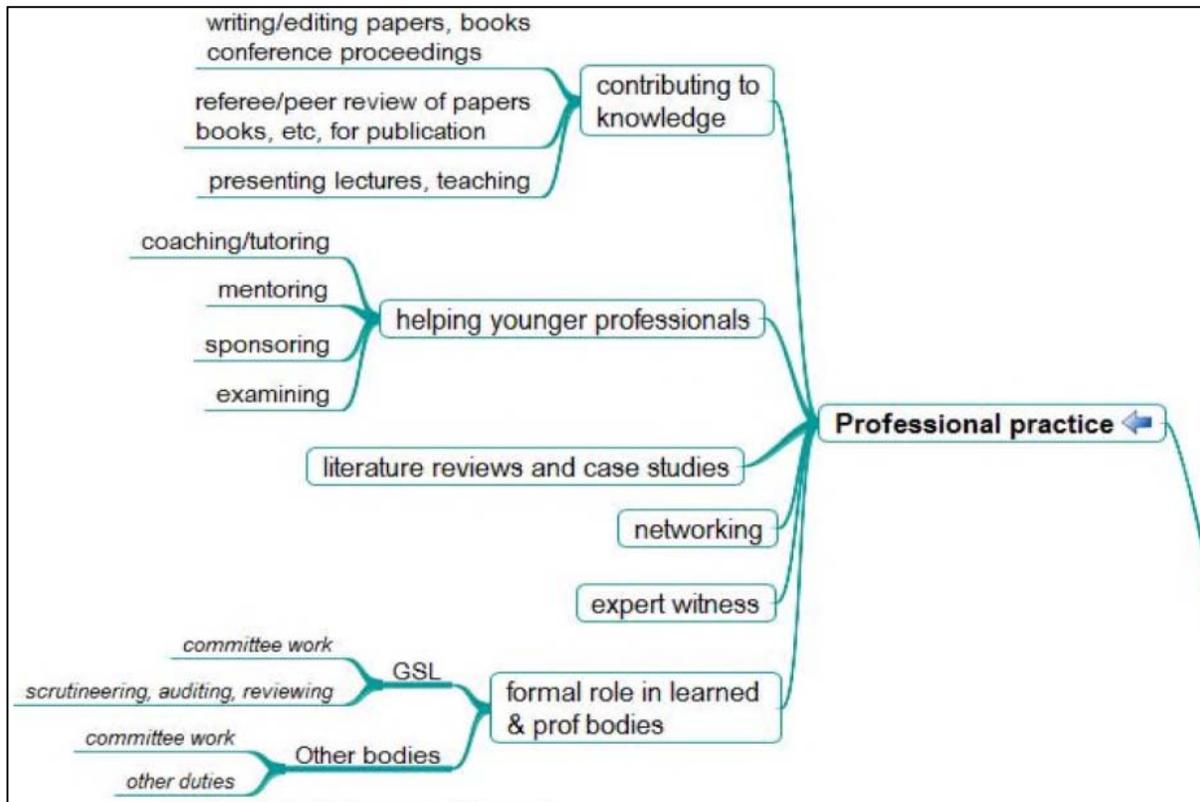


Figure 1. The professional practice part of the GSL's Mind Map (2017b).

The main subheadings under the GSL's professional practice heading are the titles of main CPD activity areas in other CPD programs, e.g. contributing to knowledge, mentoring, and participating in the work of learned and professional bodies (service to industry). The GSL has thus provided a way out of the "professional practice conundrum." Contributing to knowledge or doing professional society committee work, etc. may be engaged as part of one's salaried position and thus are part of professional practice. But these work activities extend beyond carrying out routine tasks or using existing skills or knowledge and thus qualify as CPD activities that should be part of one's CPD log. There is thus no need for a separate "professional practice" main CPD activity thus eliminating the problem of melding professional practice hours into other categories of CPD hours.