



PROFESSIONAL RISK MANAGER

(PRM™) DESIGNATION

The Industry Standard
for Professional
Risk Practitioners

CANDIDATE
GUIDEBOOK





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How to Use this Candidate Guidebook

The purpose of this Professional Risk Manager (PRM™) Designation Candidate Guidebook is to ensure future and current candidates have the information needed to pursue the PRM professional certification.

Future candidates (those individuals who have not yet applied for certification) may find important and detailed information regarding the PRM Designation to determine whether it is appropriate for their career path.

Current candidates (those who have applied for and are taking the examinations) should refer to this Candidate Guidebook to aid their path to the PRM Designation.

Current PRM Designation Holders should use this Candidate Guidebook to aid their maintenance of the PRM Designation.

Be sure to read this entire document. It contains important information that will help you be a successful candidate.

We hope you will join us in promoting the PRM program as the standard for the risk management industry. Invite your peers to learn more about the PRM by sharing the link http://bit.ly/PRMIA_PRM in your social media profiles. Join the **PRM Candidate Online Community** and share your experiences with others on this certification path.



Many of your questions can be answered by this PRM Candidate Guidebook. However, as a quick reference, some of the more commonly asked questions from exam candidates can be found on the [online FAQs page](#).

PRMIA CONTACT INFORMATION

Inquiries related to PRMIA Membership or the PRM Designation program may be submitted using the options below.

Inquiry Category	Online Contact Us Form	Category Email
Membership and renewal	General Questions	support@prmia.org
General questions about certification	General Questions	support@prmia.org
Specific questions about the PRM Designation program	PRM Certification Question	certification@prmia.org
Specific questions about a PRMIA certificate program (Associate PRM, ORM, CCRM, MLARM)	PRM Certification Question	certification@prmia.org
PRM publications support (Handbooks, Standards, Case Studies, etc.)	PRM Publications Support	support@prmia.org
Exam results	Exam Result Inquiries	certification@prmia.org
Fees and refunds	Billing Question	support@prmia.org
PRMIA courses and training, including member webinars	Training Inquiries	learning@prmia.org
Continued Risk Learning (recertification)	PRM Certification Question	certification@prmia.org



Inquiries related to the certification process or requests for appeals of results may be submitted by completing the Contact Us form titled Exam Result Inquiries.

Accommodation requests: Examinees who require specific test environment accommodations may contact certification@prmia.org with details of the specific accommodations required for testing.

Report a **potential violation** of the PRMIA Standards of Best Practice, Conduct, and Ethics via the PRMIA website.

Do not hesitate to contact certification@prmia.org or call +1-612-605-5370 or +44 020 7096 0827 for answers to any other questions.

About the Professional Risk Manager (PRM™) Designation Program

The **Professional Risk Manager (PRM) Designation** is a globally recognized, graduate-level risk management credential.

The PRMIA PRM Designation is a series of evaluation exams, designed to recognize the competencies of professional risk managers and awarded to individuals with proven knowledge and skills in financial risk management.

Endorsed by leading university programs and industry firms, it is the global standard for risk management professionals.

Built by a broad coalition of industry leaders to reflect the mission objectives of the association and to establish the leading form of education, validation, and certification in the risk management profession, the PRM includes candidates and current holders from over 100 countries.

Today's risk professionals are expected to know and understand industry best practices and be committed to using them. There is no better way for risk managers to show their commitment than by proving they have the knowledge, skills, and qualifications to back their experience.

As of August 2022:

3,480
PRM Designation
Holders in
110
Countries



Who holds the PRM?

PRM holders have shown their competence in risk management tools, techniques, theories, and principles. It is intended for Financial Analysts, Risk Managers, Chief Risk Officers, and Chief Executive Officers.

Current PRM certified professionals include staff from large banks and corporations, universities, government agencies, and other non-financial organizations. Organizations represented include Ernst & Young (EY), Credit Suisse, HSBC, ING, First Derivatives, Deloitte, KPMG, UBS, Scotiabank, PWC and National Bank of Canada.

**Access PRMIA
Certifications
Public Directory
for a list of PRM
Designation
holders.**

Holders of the Professional Risk Manager Designation have demonstrated their knowledge and skills related to:

- Risk management best practices and the finance theory underpinning risk management
- Financial instruments and their associated risks and uses
- The roles, features, and processes within the various financial markets
- Mathematical foundations of risk measurement
- Risk management frameworks and operational risk best practices
- The classic credit risk lifecycle, products, and methodologies
- Counterparty risk management (CVA, DVA, XVA) elements
- The foundations of market risk
- The foundations and complexities of asset liability management
- The foundations of liquidity risk
- Lessons learned from failed systems and practices and major risk events
- Best practices of governance, conduct, and ethics



Program Design



The Professional Risk Manager Designation program was developed under the guidance of the PRMIA Education Committee and with input from current and future Professional Risk Managers around the globe. Its subject matter is based on relevant, readily available sources of literature on the specific subjects within its syllabus.

Specifically, the program has been designed with four of the PRMIA Mission objectives in mind:

1 To be a leader of industry opinion and a proponent for the risk management profession

By setting the higher standard in risk certification, we create standards of practice and accountability that will define what Professional Risk Managers represent to their colleagues and employers.

2 To drive the integration of practice and theory, and certify the credentials of those in our profession

Neither theory nor practice will successfully develop to their potential without a strong interaction among professionals in each area. The Professional Risk Manager program contains subject matter drawn from risk management theory, finance theory, the math underpinning risk measurement, and applied practices of our profession.

We directly assess knowledge of finance and basic math. Such knowledge is essential for risk managers, as it forms the foundation of risk measurement and management.

We assess practical knowledge about markets: trading practices, intermediaries, settlement, and other conventions in specific markets. These market choices will reflect the most global of markets as well as some more narrowly defined markets, with the latter giving us the opportunity to expose people to markets in which they may not normally be active.

The PRM Designation program includes an assessment of the application of important risk management lessons from the PRMIA Case Studies. Narratives of historical incidents where critical risk management issues have arisen give us the opportunity to conduct a pathology of events from around the globe and to assess members' understanding of the cases' root causes. **Access the PRMIA Case Studies assessed as part of the PRM Designation Program from www.prmia.org/PRM.**



3

To be global in our focus, promoting cross-cultural ethical standards, serving emerging as well as more developed markets

The content of the PRM program is designed to be geographically neutral. Specific sections focusing on “markets” are designed so that a variety of markets and market lessons are studied.

The **PRMIA Standards of Best Practice, Conduct, and Ethics** (Code of Conduct) represent the standards of behavior that Professional Risk Managers promise to their colleagues and employers. It has been written to cut across geographic and cultural boundaries. All Professional Risk Managers will be required to study the Code for the program and adhere to it to stay in good standing as a certified PRM.

The **PRMIA Governance Principles** delineate seven key principles to best practices of corporate governance, all gleaned from governance documents developed by leading public and private entities from around the world.

4

To be transparent, nonprofit, independent, member-focused, and member-driven

PRMIA is a non-profit professional association under the full control of its members. It does not have for-profit subsidiaries that may financially benefit individuals. The **PRMIA Bylaws** provide strong protection for member rights and the assets of the membership. We are “of the risk professional, by the risk professional, and for the risk professional.”

“ The PRM Designation has a cutting-edge curriculum that provides for the most effective path to Professional Risk Manager success. ”

— JOHN PAUL BROUSSARD, PHD, PRM
EDUCATION COMMITTEE CHAIR

PRM Requirements

The PRM Designation program consists of three core requirement areas:

1. Experience Requirements
2. Examination Requirements
3. Recertification Requirements

The purpose and scope of each are described in detail in the following sections.

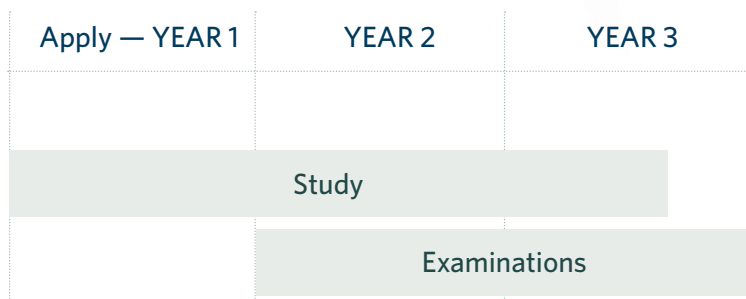
The experience and examination requirements must be met within the original three-year enrollment period. Individuals who achieve the PRM Designation must complete the required recertification requirements in an annual recertification period.

ENROLLMENT PERIOD

The PRM enrollment period begins with the date of the PRM application submission.

While some PRM candidates are ready to sit for their exams with little study, the 36-month enrollment period has been set to allow for 9-12 months of study before the exams are attempted.

It is expected that the application process may take between 14-60 days, with a vast majority of applications reviewed and verified (approved) within two weeks of initial submission. A few applications require additional documentation or additional time to receive and verify the evidence, causing the review to take up to 60 days.



What does having PRM after my name do for me?

Along with the accomplishment of passing the exam comes the ability to set yourself apart in the industry. Less than 20% of risk professionals carry the PRM designation after their name, so PRM certified professionals have many more opportunities in the competitive job market than those who do not hold the PRM. Businesses recognize the importance of the skill sets proven by the PRM Designation, and many more are requiring the credential in their higher-level positions.

STUDYING FOR THE PRM

Each individual's study plan is unique, and each PRM candidate's experience is different. PRMIA provides a self-study guide within this guidebook as well as several online resources to aid PRM candidates in their study needs. These resources were developed to help PRM candidates understand their current knowledge and skill level so they can focus their study efforts on topics that matter to them.¹

EXAMINATION PERIOD

All required examinations must be successfully completed within a two-year period. The two-year period commences from the date of the first successful PRM examination. It is the candidate's responsibility to monitor progress towards completing the exams within the three-year enrollment period.

See the **Examination Requirements** (page 9) for details.

EXPERIENCE REQUIREMENTS

The experience requirements ensure that PRMIA members who seek the PRM Designation are qualified and ready to begin the certification process. To become a PRM candidate, applicants must:

- Hold a current Sustaining membership in PRMIA; and
- Meet these minimum experience requirements:
 - Completed graduate school (i.e., MBA, MSF, MQF, etc.) or be a current CFA charterholder
 - Alternatively, if a master's degree is not held:
 - Two years of full-time work experience and a bachelor's degree; or
 - Four years of full-time work experience

Work experience must be associated with the financial services industries (including regulatory or rating industries), or in the risk management department of any industry.

The PRM Designation was designed to be a graduate-level certification program, so individuals seeking the designation are required to hold a master's-level degree (or equivalent) before beginning the examination requirements.

Recognizing the value of work experience in obtaining the necessary knowledge and skills to be competent in the industry, alternatives to this requirement are allowed.

¹ While PRMIA has provided several free study resources for all PRMIA Sustaining members as a member resource, it is up to each individual PRM candidate to determine which topics and areas they need to further study before attempting the PRM examinations. PRMIA makes no claims of success on the exams based on the candidate's use, or non-use, of these available resources.

As a non-profit association following the standards and guidelines related to **ISO IEC 17024:2012** – *General requirements for bodies operating certification of persons*, it is important to ensure all PRM candidates are approved through an application process, where the candidates’ credentials are verified and approved prior to full enrollment.

See the **Application section** (page 17) for details.

EXAMINATION REQUIREMENTS

To achieve the PRM Designation, candidates must:

- Complete the PRM Designation program within three years of initial enrollment
- Pass all required PRM exams within a two-year period (exemptions may apply)

Candidates may take the exams in any order. Candidates may take exams over more than a two-year period, but any exams passed that are older than two years will need to be retaken. See **Retaking the Exams** (page 25) for details.

Should the examination period extend beyond the original three-year enrollment period, candidates will automatically be entered into a six-month grace period. However, candidates must monitor their exam authorization expiration dates and request extensions formally from PRMIA should they need to extend their exam authorizations with Pearson VUE, the company with which PRMIA has contracted to administer the PRMIA examinations at its test centers around the globe. Refer to the **PRM Frequently Asked Questions** for details on the difference between the enrollment period and the exam authorization periods.

EXAM EXEMPTIONS: CROSS-OVER QUALIFICATIONS

As part of the PRM Designation, PRMIA recognizes the achievements of those who have other professional designations and gives partial credit towards completion of the requirements for the PRM Designation. See the **PRM syllabus** (page 12) for details on the required exams for the PRM program.

Program	Awarding Organization	PRM Program Exemptions
Chartered Financial Analyst (CFA)	CFA Institute	Exam 1, Experience
CIIA charter holder	Association of Certified International Investment Analysts (ACIIA)	Exam 1
PRMIA Accredited University Program	Participating Universities	Exam 1

Cross-over exemptions: CFA and CIIA

PRMIA members who currently hold a CFA or CIIA are eligible for exemptions for PRM Designation examinations as shown in the table. The CFA charterholder status also provides evidence that applicants meet the PRM experience requirements (master's degree or equivalent) as long as the CFA status is current at the time of application.

Required CFA documentation for cross-over exemption request:

- A link to the CFA Institute's issued digital certificate
- Full name as it appears on the CFA certificate
- CFA number

Required CIIA documentation for cross-over exemption request:

- A scanned copy of the CIIA certificate
- Full name as it appears on the CIIA certificate
- CIIA number

To Request a Cross-over Exemption

New PRM Applicants

New applicants can request a PRM exam exemption in the PRM Application form. Even if individuals are eligible for an exemption, the complete PRM program fee must be paid. There is no additional fee for the PRMIA exemption process.

Current PRM Candidates

Individuals currently on the PRM certification path seeking an exemption must upload the required documentation to the "PRMIA Certification Profile" tab in the user's member profile.

To upload the required evidence, sign in to the PRMIA account and:

1. Click the profile icon.
2. Click the "My PRMIA Certification Profile" tab.
3. In the section titled "Required Experience/Education Documents to become a PRM Holder," upload the related documentation.
4. Email certification@prmia.org to notify the Learning and Development team of the exemption request.

All exemption requests are processed once per week. Individuals seeking exemptions will be notified via email from certification@prmia.org of the results of the review.

EXAM EXEMPTIONS: PRMIA RISK ACCREDITATION PROGRAM — ACCREDITED UNIVERSITY PROGRAMS

The PRMIA Risk Accreditation Program offers university graduates, who have completed appropriate courses within approved PRMIA-accredited degree programs, exemption from PRM examinations as shown in the table on page 9.

All other PRM Designation requirements (experience and membership) must be met before the PRM holder status is awarded.

Visit the [PRMIA Risk Accreditation Program website](#) to view the current list of PRMIA accredited risk programs.

RECERTIFICATION REQUIREMENTS: MAINTAINING THE PRM DESIGNATION

Once the PRM Designation is achieved, holders must meet the following maintenance requirements:

- Hold a PRMIA Sustaining membership each year, starting with the day the PRM Designation is obtained.
- Complete 20 Continued Risk Learning (CRL) credits each calendar year starting with the calendar year immediately after the PRM Designation is achieved.



For details on how to submit Continued Risk Learning (CRL) credits, visit the [CRL Program Guide](#).

Current PRMIA Accredited University Programs

Engineer ENSAE

Specialty in Quantitative Finance and Risk Management

Georgia State University, Robinson College of Business

MS Mathematical Risk Management

Heriot-Watt University

MSc in Quantitative Financial Risk Management

University of Reading ICMA Centre

Masters in Financial Risk Management

Imperial College London

MSc Risk Management & Financial Engineering

North-West University; South Africa

Honors BSc in Business Mathematics and Informatics with specialization in Quantitative Risk Management

NYU Stern School of Business

Executive Master of Science in Risk Management

Queen's University Belfast

MSc Risk Management and Financial Regulation

University College Dublin, Smurfit School of Business

MSc in Quantitative Finance

University College Dublin, The Institute of Bankers in Ireland

Executive Masters in Risk Management

Université Laval

MBA Finance and MSc Finance

University of Applied Sciences bfi Vienna (UAS bfi Vienna) and University of Economics in Katowice

University of Canterbury

MCom (Finance)

University of Hong Kong

Bachelor of Science in Quantitative Finance

University of Waterloo

Bachelor, Mathematics/Financial Analysis and Risk Management

(In application stage)

XI-AN Jiaotong-Liverpool University

BBSc. Financial Mathematics

PRM Syllabus

The Professional Risk Manager (PRM) syllabus includes a comprehensive set of knowledge and skills expected of a competent financial risk manager.

The subject matter of the PRM program is broken down broadly among nine major domain areas. The current knowledge and skill level of a Professional Risk Manager is assessed using examinations that include multiple choice test questions.

A detailed syllabus is provided in the appendix (page 38). The detailed test structure (or test specifications) for the PRM program is described in the next section of this guidebook.

PRM Exam Structure

The purpose of the PRM examinations is to assess the current knowledge and skill levels for financial risk managers to determine competency against the PRM Designation syllabus domain areas in relation to the global standards expected of a professional risk manager.

Knowledge and skills are assessed by multiple-choice test questions that make up each examination. In an effort to meet the requirements of **ISO 17024:2012 - General requirements for bodies operating certification of persons**, all current requirements, including the test specifications detailed in this section, were validated by the PRM Test Specifications Committee and approved by the PRMIA Education Committee.

The PRM exam program includes two required examinations.

The PRM Exam 1 assesses **knowledge** of the domains related to finance theory, instruments, markets, and the application of mathematical foundations of risk measurement.

The PRM Exam 2 assesses the **knowledge** of the domains related to risk management frameworks, asset liability management, funds transfer pricing, the specific risk areas of operational risk, credit risk, counterparty credit risk, and market risk, as well as the PRMIA Standards and Governance.

The PRM Exam 2 includes a **Practicum Assessment** that assesses the **ability** to apply lessons learned from the PRMIA case studies using knowledge from across the PRM syllabus. It is for this reason that the graphic below shows Exam 2 assessing all areas of the PRM syllabus as some test questions that assess a case study may also assess the application of knowledge from the domains of finance theory, instruments, or markets, as well as some of the mathematical foundations of risk management.

The table below provides a summary of the nine major domain areas and which PRM examination assesses the domain for the PRM program.

Domain	Domain Heading	PRM Exam
I	Finance Theory	Exam 1
II	Financial Instruments	
III	Financial Markets	
IV	Mathematical Foundations of Risk Measurement	
V	Risk Management Frameworks and Operational Risk	Exam 2
VI	Credit Risk and Counterparty Credit Risk	
VII	Market Risk, Asset Liability Management, and Funds Transfer Pricing	
VIII	Case Study Practicum	
IX	PRMIA Standards and Governance	

PRM TEST SPECIFICATIONS

In an effort to ensure PRM candidates can prepare for their studies, the following tables provide the specific test specifications that are used to develop each exam form.

The exams include 100% multiple choice test questions with four options, where only one option is the intended correct answer.

The PRM Exam 1 consists of 60 stand-alone test questions.

The PRM Exam 2 consists of 64 stand-alone test questions and a practicum portion that includes four scenarios each followed by five related test questions, bringing the total number of test questions to 84.

Domains Assessed	Number of Stand-Alone Test Questions ¹		Number of Practicum-Based Test Questions ²		Proportion Across Both Exams
	PRM Exam 1	PRM Exam 2	PRM Exam 2	PRM Exam 2	
I. Finance Theory	17		0-2		12%
II. Financial Instruments	14		0-2		10%
III. Financial Markets	16		0-2		11%
IV. Mathematical Foundations of Risk Measurement	13		0-2		9%
V. Risk Management Frameworks and Operational Risk		23	4-7		16%
VI. Credit Risk and Counterparty Credit Risk		20	4-7		15%
VII. Market Risk, Asset Liability Management, and Funds Transfer Pricing		17	4-7		13%
VIII. Case Study Practicum ³		0	20⁴		12%
IX. PRMIA Standards and Governance		4	0		2%
TOTAL	60		84		100%

¹ Stand-alone test questions are questions intended to be answered based on the information provided in the question's stem or prompt. The answer to the question will refer only to the content provided in that specific question.

² Practicum-based test questions are questions intended to be answered based on the information provided in the scenario that precedes the question. The question's stem or prompt may require additional information to be identified from the provided scenario in order to answer the question.

³ The Case Study Practicum portion of PRM exam 2 includes test questions that assess the application of knowledge from domains I through VII. Due to the nature of the practical application of the lessons learned from the case studies, different skill sets and knowledge will be assessed with each practicum. As a result, each exam form may contain different sets of test questions assessing these areas.

⁴ The Case Study Practicum includes 4 sets of 5 test questions, to make up the 20 total test questions that assess application of the lessons learned from the PRMIA Case Studies. Each set of test questions may include between 0-2 questions related to domains I-IV, and will include between 4-7 questions related to domains V-VII.

PRM EXAMS — TEST LENGTH AND TESTING TIME

The testing time limits established for the PRM examination is set to ensure sufficient time for all candidates to complete the exams.

Exam Title	Test Length (number of test questions)	Testing Time Limit
Exam 1	60 questions	4 hours
Exam 2	84 questions	4 hours

Candidates who need additional time or specific test environment accommodations due to medical or other accommodation needs may contact certification@prmia.org with details of the specific accommodations required. A staff member will review the request and work with Pearson VUE to determine how best to meet the accommodation requirements.

EXAM PLATFORM

The PRM exams are computer-based. Questions are multiple choice with four options; one option is the correct answer.

CALCULATORS

For the portions of the exam that allow calculators to be used, the platform provides an online scientific calculator, the Texas Instrument TI-30XS. This calculator is part of the test delivery system.

A user guide for the calculator can be found on the [Texas Instruments Guidebooks](#) page.

EXAM LANGUAGE

The PRM exams are offered in the English language only.

The Path to Certification

Professional certifications are an excellent way to enhance a resumé and to ultimately provide validation of knowledge and skills.

This section of the guidebook describes the path for new applicants and provides additional resources that some applicants may find helpful as they progress through the certification program.

IS THIS THE RIGHT CERTIFICATION FOR YOU?

Choosing a professional certification is a personal one that depends on professional goals, current knowledge or skill level, and how well that credential will aid one's career path.

When considering the Professional Risk Manager Designation, one could consider the following:

- Do I meet the **experience requirements** (page 8)?
 - If I don't currently meet the experience requirements, or the alternatives, will I meet them soon?
- Am I knowledgeable of the topics shown in the PRM syllabus?
- Is the program a global certification recognized in the regions where I work?
- Does my employer or potential employer recognize the importance of continued education through the study for a professional certification?
 - If not, **review the information provided by PRMIA** for making the case for the PRM.

If answers to these questions are favorable and evidence exists for meeting the current requirements, continue on for information about applying.

REFUND POLICY

The PRM application and program fees are not refundable or transferable. The information provided in this guidebook and online is intended to ensure candidates who apply for the PRM program are well informed about its requirements and fees before applying. For more information, visit the PRMIA [Terms of Use](#).

APPLICATION

Potential PRM candidates must first apply to PRMIA by visiting <https://prmia.org/PRMApplication>

PRM Designation candidates are required to submit verifiable evidence of meeting the minimum experience requirements online as part of the application.

The following evidence is accepted for meeting experience requirements:

- Scanned copy of the diploma showing the graduation date, name, and the university and program name; or
- Scanned copy of an official transcript showing the graduation date, name, and the university and program name.

All documents should be submitted in the original language with official English translation.

For applicants who are required to submit verifiable evidence for work experience, the following details are required for verification:

- Employer name
- Role/title
- Start and end dates of employment
- Employment status (full time or part time)
 - If part time, hours per week
- Total years plus months of duration
- Summary of role/work description
- Reference names with phone number and email address

References will be contacted to verify the employment dates. Alternatively, a formal letter from a current employer detailing the duration of employment may be submitted with the application.

The application review process will occur within two weeks of application submission provided the application fee is paid. For applications with missing or incomplete information, the review process may take longer. In some cases, responses from references for verification may delay the application review process. In these instances, candidates are notified of the status of the application.

Refer to the PRM Frequently Asked Questions for details on the [application process](#) and the required documentation.

PROFILE DETAILS FOR PRMIA

It is critical that a complete PRMIA profile be provided when applying for the PRM certification or any certificate program.

PRMIA uses the following details when reviewing the application and also when sending pre-approval for any exam authorizations to Pearson VUE for testing purposes.

- Name as it appears on identification card
- Full preferred mailing address
- Phone number with country (or country code)

Information on PRMIA Data Privacy may be found in the [Terms of Use](#).

PROGRAM FEES

Individuals with an approved application are required to indicate their readiness to begin the study process by paying the PRM program fee within 90 days of the date the application was submitted to PRMIA.

Instructions on how to pay the fee are included in the application approval email.

Within 2-3 business days of paying the program fee, authorization to take the required examinations will be submitted to Pearson VUE, and instructions on how to schedule the exams and access to the digital PRM Handbook will be sent via email to the PRM candidate.



PRMIA has contracted with Pearson VUE to administer the PRM examinations at its test centers around the globe. Follow the instructions in the email to create an account with **Pearson VUE**.

PROFILE DETAILS FOR PEARSON VUE

Once a candidate receives an email notification that the exam authorization has been submitted to Pearson VUE, an account must be created with Pearson VUE, unless one already exists.

When creating a new account with Pearson VUE, candidates must enter their profile details as they appear in their PRMIA profile; these details are used to link their exam records at Pearson with their records at PRMIA.

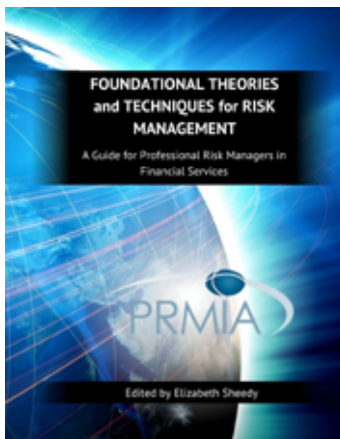
PREPARING FOR THE EXAMS

The Professional Risk Managers' Handbook is a resource provided to all PRM candidates to allow them to study and prepare for the PRM Exams.

The PRM Handbook and supporting materials are designed for self-study.

A study guide is provided within this guidebook to help develop a study plan.

Optional training courses are available to help prepare for the PRM exams — these are not required to achieve the PRM Designation but are available for candidates who wish to have additional support in their learning path.



PROFESSIONAL RISK MANAGERS' HANDBOOK

The Professional Risk Managers' Handbook is a comprehensive guide to current theory and best practices and is the recommended reading material for candidates preparing for the exams of the PRM certification program.

The PRM Handbook consists of several books. Each book within the set aligns with the major domain areas of the PRM syllabus as shown in the table below.

PRM Handbook Title	PRM Syllabus Domains
Foundational Theories and Techniques for Risk Management	I. Financial Theory II. Financial Instruments III. Financial Markets
Mathematical Foundations of Risk Measurement	IV. Mathematical Foundations of Risk Measurement
Practices for Operational Risk Management	V. Risk Management Frameworks and Operational Risk
Practices for Credit and Counterparty Credit Risk Management	VI. Credit Risk and Counterparty Credit Risk
Practices for Market Risk Management	VII. Market Risk, Asset Liability Management and Funds Transfer Pricing

DIGITAL RESOURCES

To support the use and study from the PRM Handbook, additional digital resources are available to candidates. These resources are referenced within the text of the handbook and are freely available on the PRMIA website.

PRMIA COMMUNITIES



ONLINE COMMUNITIES

PRMIA Sustaining members have access to the PRMIA Online Communities. Communities for current PRM candidates studying for the PRM exams have been established to allow candidates to engage with each other, ask questions of the PRMIA Risk Leaders and Education Committee members, and seek advice that will help them in their certification path.

To join a PRMIA online community, candidates may sign in to their PRMIA Sustaining member account, and access the Online Communities in their profile's **"My Participation"** tab.

RISK MANAGEMENT IN PRACTICE

Practicing risk managers may feel more prepared for the exams by going to work each day where they interact with other professionals, read industry magazines, software manuals, company policies and procedures, academic journals, websites and regulatory notices. Current professionals attend risk committee meetings, prepare risk reports, give presentations, and write papers.

Many of these work-related activities may already prepare them for taking the PRM exams. Candidates who want to gauge their current knowledge level against the PRM syllabus may take a moment to self-assess by utilizing the **PRM Designation Skills Self-Assessment tool**.

PRMIA CHAPTER EVENTS

PRMIA has regional chapters around the world that host regular meetings on current risk management topics.

The speakers are leading industry figures from banks, exchanges, regulators, academia, consultants, vendors, asset managers, etc. The meetings are open to all PRMIA members and constitute an excellent opportunity for professionals to stay informed of the latest developments in risk management and measurement.



PRM SELF-STUDY GUIDE

This guidebook contains a detailed **Study Guide** (page 28) that encourages a structured learning approach to PRM exam preparation.

The Study Guide is organized by exam and domain, and includes advice and motivation on examination techniques including a considered approach to modular multiple-choice timed exams. It aids studying for the examinations, especially in the timing and ordering of study, key facts of knowledge, and practice with worked examples.

OPTIONAL SUPPLEMENTAL TRAINING

For candidates who would like more structure to their study and a guided process in a learning community, PRMIA offers several self-study options through its learning management system. Visit www.prmia.org/Learning for details on optional training.

SCHEDULING EXAMS

PRM exams are administered in an online proctored environment or in a proctored environment at **Pearson VUE facilities** around the globe.

Candidates who wish to schedule an exam will need to create an account with Pearson VUE or log into their existing account to view pre-approved exams at www.pearsonvue.com/prmia.

Exams are offered four times per year during specific testing windows. These testing intervals allow for consistent opportunities to complete the PRM exams within the required two-year period. Current exam schedules can be found on the **PRMIA website** and also on the **Pearson VUE scheduling page**.

Candidates are encouraged to review the **important details** about registration, cancellation, identification requirements and space availability. The current **testing schedule** on the PRMIA website shows when the scheduling and testing windows open.

CANCELING OR RESCHEDULING

In recognition of the busy and changing schedules of risk managers, candidates may change their exam appointment without charge through the Pearson VUE system at www.pearsonvue.com/prmia.

All change requests must be made at least one business day before the testing date or the entire exam fee will be forfeited.

All authorized exams have an expiration date. To view the exam expiration dates, candidates may log into their Pearson VUE account and view the details of the pre-approved exam.

All program and exam fees are **final and non-refundable**.



CHECKING IN FOR AN EXAM APPOINTMENT

On the date of the appointment, candidates should arrive at the testing center at least 15 minutes before the scheduled start time. Two forms of identification are required. The first must be a current government-issued ID with a photograph and signature.

In addition to providing identification during the admissions process, all authorized Pearson VUE testing centers will take a digital signature using a signature pad and a digital photograph.

Arrive on Time

It is very important that candidates arrive at the testing center early. Candidates that arrive late to the testing center may not be permitted to test. The full fee for the exam will be charged even if candidates are not admitted for any reason. As these centers offer exams for other organizations, not everyone in the room will be taking the same exam, so no assumptions should be made about when other candidates enter or leave the testing center.

EXAM SECURITY

The PRM exam is conducted under secure conditions. Any attempt by candidates to copy questions by any means, including organized memorizing, and to distribute these questions to other individuals, will be treated as unethical behavior and may result in penalties against the candidate, which could include forfeiture of any PRMIA certifications, vouchers, and possible expulsion from PRMIA. Incitement to copy and usage of copied questions may also result in the same penalties.

TAKING THE EXAMS

PRM candidates have two years to pass all required exams of the PRM Designation. The two-year period commences from the date of the first successful PRM examination. Candidates may take exams over more than a two-year period, but any exams older than two years will need to be retaken.

- Candidates may only sit for the same exam once every 60 days.
- The exams are computer-based.
- Candidates will not receive any copies of the questions.
- No paper may be brought into the testing center; however, candidates will be provided with an erasable board upon request.

Examination Administration

The test begins with a tutorial that introduces the functionality of the exam and a brief message from PRMIA. After the tutorial has been viewed, the candidate may begin the exam, which includes multiple-choice questions, varying in quantity by exam. Sufficient time is allocated to read the tutorial and message and complete the exam.

The testing system allows marking and reviewing questions as long as time is remaining. Candidates are encouraged to monitor and use their time effectively to ensure they respond to all required test questions.

Incidents During an Exam Administration

In the event of an incident where the exam candidate believes the testing environment is no longer compatible with good examination conditions (computer failure, inadequate supplies, excessive noise, or any other circumstance), the candidate must bring the incident to the attention of the examination proctor (invigilator) immediately upon the incident being noticed – without continuing the exam.

Failure to inform the proctor in this manner will invalidate any subsequent candidate incident reporting that cannot be substantiated by the test center.

Calculators

For the portions of an exam that allow calculators to be used, the platform provides an online scientific calculator, the Texas Instrument TI-30XS. This calculator is part of the test delivery system. A user guide for the calculator can be found on the [Texas Instruments Guidebooks](#) page.

Candidates may also choose to purchase the hand-held version (TI-30XS) to familiarize themselves with the calculator. However, personal calculators are not allowed into the testing room.

No other materials may be brought into the exam room.

EXAM RESULTS

PRMIA will post exam results to candidates' PRMIA profiles no later than 15 business days from the testing date. When available, candidates will receive an email from certification@prmia.org with instructions on how to access results.

RETAKE THE EXAMS

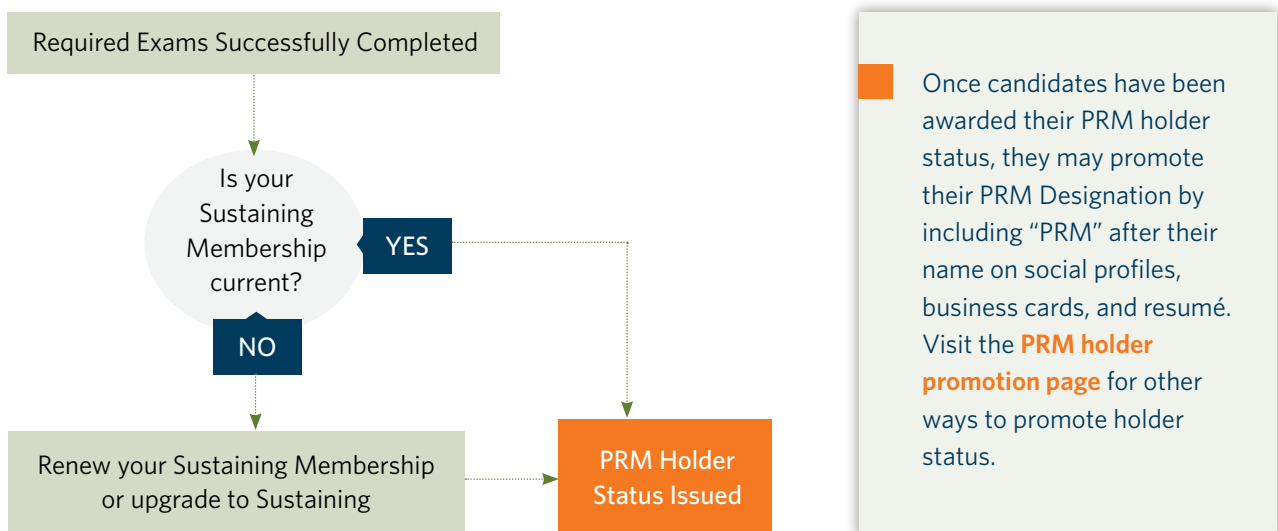
Candidates who do not pass an exam are eligible to retake the exam 60 days from the date of the last exam. Individuals who require a retake will receive notifications from PRMIA at the beginning of the testing window when they are eligible to retake the exam with instructions for how to purchase an exam retake.

Candidates may also contact support@prmia.org or submit a **Contact Us inquiry** to request the retake exam purchase link.

ACHIEVING "HOLDER" STATUS

The PRM Designation enrollment period is three years, and all required examinations must be completed successfully within a two-year period.

Each PRM candidate has a unique situation, with a unique path to certification. For candidates who have successfully completed the required exams, use the guided process map below to determine how best to achieve the "Holder" status for the PRM Designation.



MAINTAINING PRM DESIGNATION HOLDER STATUS

Once the PRM Designation is achieved, holders must meet the following recertification (or maintenance) requirements:

- Hold a PRMIA Sustaining membership each year, starting with the day the PRM Designation is achieved
- Complete 20 Continued Risk Learning (CRL) credits each calendar year starting with the calendar year immediately after the PRM Designation is achieved

As a Sustaining member of PRMIA, PRM holders have access to the Continued Risk Learning (CRL) Program within their member profile. While all Sustaining members have access to the CRL Program, PRM holders have specific requirements they must meet in order for CRL credits to be accepted towards recertification.

PRM holders should use the [CRL Program Guide](#) for details about required documented evidence, which CRL credits are reported by PRMIA automatically in the CRL Program tab of their member profile, and which events and credits need to be self-reported.

RECERTIFICATION PERIOD

The recertification period for each PRM holder begins the first full calendar year after they have achieved their PRM Designation status.

It is important to maintain the holder status each calendar year. PRM holders have until December 31 of each calendar year to submit CRL credits to their PRMIA profile.

PRMIA Learning and Development conducts an audit in January each year of the PRM holder's CRL records submitted in the prior year. The results of the audit are communicated in February.

Any PRM holder lacking evidence of meeting the recertification requirements will be provided a notification with instructions and deadlines on when these requirements must be met.

While PRMIA provides the CRL Program to aid PRM holders in recording evidence of meeting the recertification requirement of 20 CRL credits per calendar year, PRM holders are expected to maintain their records in their personal files as well.

If a PRM Designation holder fails to meet the maintenance requirements, the PRM Designation will lapse to the "Qualified" status.



Self-Study Guide

OVERVIEW

PRM Designation candidates have varying degrees of experience and levels of expertise. This self-study guide is intended to assist all candidates with defining a study plan as they prepare to take the examination.

Some candidates have been working in the risk management field for over five years and are experienced at applying their knowledge of risk management techniques. Others have recently completed their master's degree and have firm knowledge of risk management techniques, but may not have had the opportunity to apply them in a role. Still others may be in the financial services industry looking for an opportunity to begin working within risk management and may be seeking the PRM Designation as a means to allow for a career change or a promotion within their organization.

This study guide is intended to assist candidates in identifying an individual study plan and determine how to move forward on a path to certification.

Some of the resources provided in this study guide are free and publicly available, while others are available only to current PRM candidates (those who have enrolled into the PRM program and paid the PRM program fee).

ONLINE STUDY COMMUNITIES

PRM candidates may engage with peers in the online community specifically for PRM candidates. The online communities are available to PRMIA Sustaining members to engage with each other, ask questions of the PRMIA Risk Leaders and Education Committee members, and seek advice that will help them on their certification path.

PRMIA COMMUNITIES

To join a PRMIA online community, candidates can sign into their PRMIA Sustaining member account, and access the Online Communities in their profile's **"My Participation"** tab.



STUDY MATERIALS

The digital version of the *Professional Risk Managers' Handbook* is provided to PRM candidates who have paid the PRM program fee as the primary study resource for the PRM examinations.

The PRM Handbook and supporting materials are designed for self-study. While PRMIA provides this study guide and offers training courses to help candidates prepare for the PRM exams, these supplementary resources are not required to schedule or take the PRM examinations.

PRMIA makes no claims or guarantee of results by the use of these materials by candidates. Each PRM candidate's path to certification is unique, and it is the responsibility of each candidate to determine their current level of knowledge and skill as they prepare to take their PRM examinations.

OVERVIEW OF THE EXAM PROGRAM

The purpose of the PRM Designation examination program is to ensure that individuals who achieve the PRM Designation have the knowledge and skills to competently work as a financial risk manager.

The way in which this is assessed is reflected in the verbs used in the PRM syllabus (see the section titled **How to read the PRM Syllabus Learning Objectives** on page 34) as well as the test specifications of the exam program (see the section titled **PRM Exam Test Specifications** on page 14).

By ensuring the learning objectives are assessed at an appropriate cognitive level and that the content structure within each exam reflects the importance of these objectives, the exams become a balanced measure of a PRM candidate's current knowledge or skill level.

PREPARATION STRATEGIES AND STUDY TIME

Each PRM candidate's path to certification is unique, and it is the responsibility of each candidate to determine their current level of knowledge and skill as they prepare to take their PRM examinations.

To aid this process, the following methods may be used to determine the amount of study time needed:

1. Gauge current knowledge level against the topics in the PRM syllabus by completing the **PRM Skills Self-Assessment tool**.
2. Use the results to prioritize the areas of the syllabus needing further study.
3. Establish a reading list using the tables in the Reading List section (page 31).
4. Establish a study plan using the worksheet in the next section (page 33).
5. Determine readiness to sit for a PRM examination.
6. Identify the scheduling and testing windows that fit into the study plan using the schedule provided on the PRMIA website.
7. When the scheduling window opens, schedule examinations, then:
 - a. Practice using the online scientific calculator, the Texas Instruments TI-30XS, by accessing the user guide on the **Texas Instruments Guidebooks** page.
 - b. **Take a simulated test** to see what the actual testing environment looks like.

PRM DESIGNATION SKILLS SELF-ASSESSMENT TOOL

Candidates who wish to gauge their current knowledge level against the topics in the PRM syllabus may take a moment to self-assess by utilizing the **PRM Designation Skills Self-Assessment tool**.

READING LIST

The following table provides a summary of each PRM examination and the related PRM Handbook Book that contains the content of that exam's syllabus.

Refer to the Appendix for the complete and detailed **PRM syllabus** (page 38).

PRM Exam	Exam Name	PRM Handbook/Resource
1	Finance Theory, Financial Instruments and Markets	Foundational Theories and Techniques for Risk Management
	Mathematical Foundations of Risk Measurements	Mathematical Foundations of Risk Measurement Digital Handbook Resources
2	Risk Management Practices	Practices for Operational Risk Management Practices for Market Risk Management Practices for Credit and Counterparty Credit Risk Management Digital Handbook Resources
	PRMIA Standards of Best Practice, Conduct and Ethics, Bylaws	PRMIA Standards of Best Practice, Conduct and Ethics, Bylaws
	Case Studies and the Practicum Examination	PRMIA Case Studies

STUDY PLAN WORKSHEET

Enrollment in the PRM program is a three-year period. Examinations may be taken in any order and must be successfully completed within a two-year period.

Candidates may use the worksheet on the next page to document their unique study plan for the three-year period or the period they think is necessary to feel prepared to take the exams.

Months 1-3	Months 4-6
Chapter 2 (Portfolio math) Chapter 6 (Term structure of interest rates) Chapter 7 (Derivatives)	Calculus Matrix Algebra
TESTING WINDOW DATES Nov. 18–Dec. 20	TESTING WINDOW DATES Feb. 17–March 13

SAMPLE
ONLY

Information from the prior sections of this self-study guide may be used to enter information into the worksheet. Candidates may view the **PRM scheduling and testing windows** on the PRMIA website to enter the testing window dates into their plan.



MY PATH TO THE PRM DESIGNATION

Months 1-3	Months 4-6	Months 7-9	Months 10-12
TESTING WINDOW DATES	TESTING WINDOW DATES	TESTING WINDOW DATES	TESTING WINDOW DATES

Months 13-15	Months 16-18	Months 19-21	Months 22-24
TESTING WINDOW DATES	TESTING WINDOW DATES	TESTING WINDOW DATES	TESTING WINDOW DATES

Months 25-27	Months 28-30	Months 31-33	Months 34-36
TESTING WINDOW DATES	TESTING WINDOW DATES	TESTING WINDOW DATES	TESTING WINDOW DATES

HOW TO READ THE PRM SYLLABUS LEARNING OBJECTIVES

The PRM syllabus was developed using Bloom’s 2001 Taxonomy for Learning¹ where specific verbs were selected to indicate the level of knowledge and skill expected of candidates for that area of the syllabus.

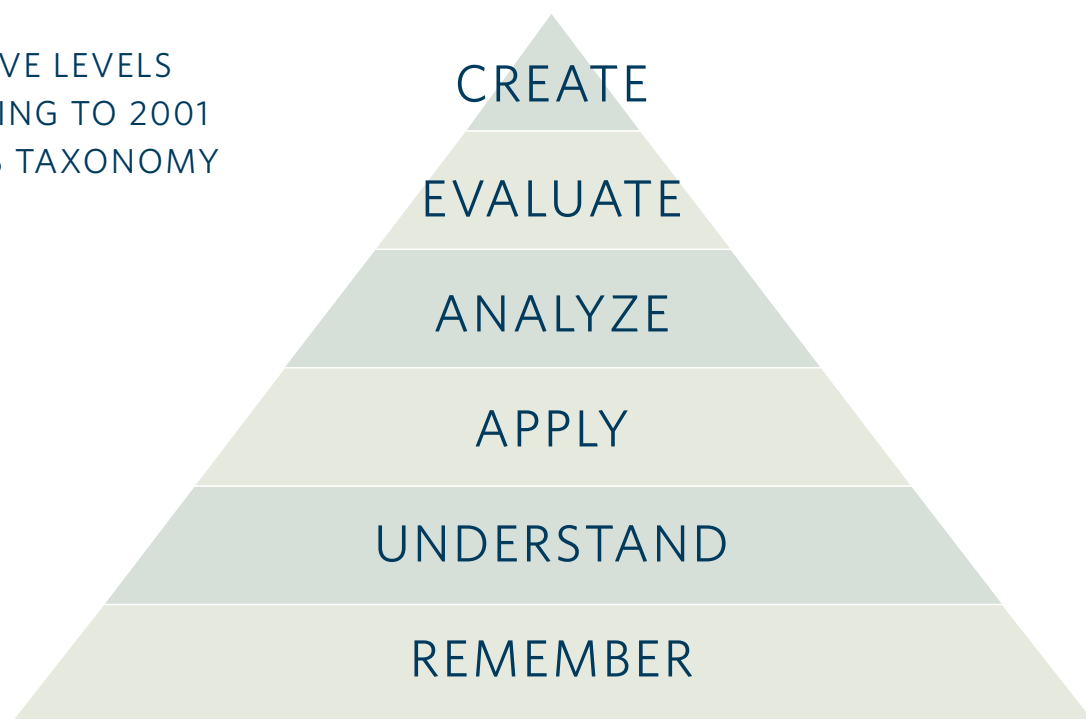
The following graphic and definitions describe the cognitive levels within the 2001 taxonomy. The verbs that are most often used for each cognitive level follows the graphic and definitions. Candidates should use these graphics and definitions as they review the syllabus objectives to determine the level of cognition that will be expected and assessed in the PRM examinations.

As an example, the syllabus topic “Performance measures” has the statement that begins with “Calculate...” and it also includes the verb “interpret.” The verb list in the table indicates that “calculate” is used for the cognitive level of “Analyze” and “interpret” is used for the cognitive level of “Evaluate.”

Given the definition of the cognitive level “Evaluate” and the nature of the statement “*Calculate* the Sharpe ratio and Jensen’s Alpha, and *interpret the results*,” examinees can expect to be assessed with test questions requiring them to apply their knowledge of calculating these metrics, then performing some form of evaluation of the result.

Whereas, the syllabus topic “mean-variance portfolio theory” includes a statement that includes the verb “describe,” which is used for the “Remember” and “Understand”

COGNITIVE LEVELS
ACCORDING TO 2001
BLOOM’S TAXONOMY



¹ Anderson, Lorin W.; Krathwohl, David R.; Bloom, Benjamin S. (2001) *A taxonomy for learning, teaching, and assessing : a revision of Bloom's taxonomy of educational objectives*. New York: Longman. ISBN 0321084055; 080131903X

levels of cognition. Given the nature of the objective statement, “Describe the axioms and assumptions of utility theory with respect to expected return and risk, and describe its application to the mean-variance portfolio theory,” examinees can expect to be assessed with test questions that assess their understanding of utility theory and the expectation is that they understand it well enough that they can describe how it is applied. The test questions will not include an application of this theory — only a description of how it can be applied.

DEFINITIONS AND COMMON VERBS USED FOR EACH COGNITIVE LEVEL

Cognitive Level	Definition	Verbs				
Remember	Remember previously learned information	Arrange	Identify	Memorize	Recognize	Reproduce
		Define	Label	Name	Relate	Select
		Describe	List	Order	Recall	State
		Duplicate	Match	Outline	Repeat	
Understand	Demonstrate an understanding of the facts	Classify	Distinguish	Generalized	Infer	Rewrite
		Convert	Estimate	Give examples	Locate	Review
		Defend	Explain	Identify	Paraphrase	Select
		Describe	Express	Indicate	Predict	Summarize
		Discuss	Extend		Recognize	Translate
Apply	Apply knowledge to actual situations	Apply	Discover	Manipulate	Prepare	Sketch
		Change	Dramatize	Modify	Produce	Solve
		Choose	Employ	Operate	Relate	Use
		Compute	Illustrate	Practice	Schedule	Write
		Demonstrate	Interpret	Predict	Show	
Analyze	Break down objects or ideas into simpler parts and find evidence to support generalizations	Analyze	Contrast	Examine	Outline	Subdivide
		Appraise	Criticize	Experiment	Point out	Test
		Breakdown	Diagram	Identify	Question	
		Calculate	Differentiate	Illustrate	Relate	
		Categorize	Discriminate	Infer	Select	
		Compare	Distinguish	Model	Separate	
Evaluate	Make and defend judgments based on internal evidence or external criteria	Appraise	Compare	Discriminate	Justify	Select
		Argue	Conclude	Estimate	Interpret	Summarize
		Assess	Contrast	Evaluate	Relate	Support
		Attach	Defend	Explain	Predict	Value
		Choose	Describe	Judge	Rate	
Create	Compile component ideas into a whole new solution or propose alternative solutions	Arrange	Compose	Explain	Reconstruct	Summarize
		Assemble	Construct	Formulate	Relate	Synthesize
		Categorize	Create	Generate	Reorganize	Tell
		Collect	Design	Plan	Revise	Write
		Combine	Develop	Prepare	Rewrite	
		Comply	Devise	Rearrange	Set up	

PRMIA Certification and Examination Policies and Procedures

The following policies are in place to ensure a timely certification path for all PRM candidates. Candidates should review these as they prepare to apply for the PRM Designation, and as they progress through the certification path.

Additional details may be found online in [PRM Frequently Asked Questions](#).

Application

- PRM applications are reviewed only with a paid PRM application fee. No pre-approval is allowed.
- For new applicants, exemptions must be requested at the time of the PRM application. Current candidates may request exemptions using the exemptions form.
- PRMIA reviews all submitted applications within 14 days of the application fee payment. In instances where additional documentation is required, if the applicant does not provide the necessary information within 60 days of the request, the application may be denied.
- Once an application is approved, applicants have 90 days to pay the program fee and formally enroll into the PRM program. If the program fee is not paid within 90 days of the date the application was submitted to PRMIA, a re-application fee may apply.

Program Enrollment

- The PRM enrollment period is three years, and this period begins the day the program fee is paid.
- All required exams must be successfully completed within two years and within the three-year enrollment period.
- It is the candidate's responsibility to monitor progress toward meeting the program deadlines and scheduling examinations.
- Individuals nearing the end of their three-year enrollment period will automatically be provided a six-month enrollment grace period to complete all required examinations. The required exams must still be completed within a two-year time frame. See [Frequently Asked Questions](#) for details.

Examinations

- Exam authorizations are issued within 2-3 business days of the program fee payment. The exam authorization period is not the same as the program enrollment period. See **Frequently Asked Questions** for details.
- The initial exam authorizations are valid for three years from the day of the program fee payment. Any retake exam authorizations purchased are valid for 12 months from the date of purchase.
- Individuals who do not pass a PRM exam and are eligible to retake an examination may request a retake purchase by contacting certification@prmia.org.
- Individuals with expiring exam authorizations may receive information from PRMIA regarding their testing options. They may also contact certification@prmia.org to request a one-time extension to the expiry date.

PRM Status Definitions

- a. **Applicant** — an individual who has submitted an application and paid the application fee, or an individual who has an approved application but has not yet paid the PRM program fee.
- b. **Candidate** — an individual who has an approved application and has paid the PRM Program fee to formally enroll in the program. This status continues until all required examinations are successfully taken.
- c. **Qualified** — a PRM candidate who has passed the required PRM examinations but has not met all other program requirements (membership and experience), or who has not met the prior year's recertification (maintenance) requirements.
- d. **Holder** — a PRMIA member who passed the required PRM examinations and currently meets all recertification (maintenance) requirements.
- e. **Retired** — a PRM certified user that has been certified as 'retired' in their professional career and holds Sustaining membership. This user is not required to submit CRL credits for yearly recertification. For instructions on how to retire the PRM holder status, contact certification@prmia.org.

PRM Syllabus

I. FINANCE THEORY

A. Arbitrage Pricing Theory

1. Describe how arbitrage pricing theory can be used for decision-making.

B. The CAPM and Multifactor Models

1. Outline the components of the Capital Asset Pricing Model (CAPM), including the risk premium, systematic and idiosyncratic risk, beta, security market line, and its underlying assumptions.
2. Compare and contrast single-factor (e.g., Capital Asset Pricing Model (CAPM)) and multifactor models.
3. Compare and contrast the capital asset pricing model and the single-index model.

C. Capital Structures

1. Outline the factors to be considered to determine the capital structure of a firm, in particular agency costs, taxes, and leverage.

D. Mean-Variance Portfolio Theory

1. Relate mean-variance portfolio theory to asset allocation decisions, with risky assets and a risk-free asset (e.g., asset correlation, efficient frontier, market portfolio, capital allocation line, capital markets line, dominated portfolio, and separation principal).
2. Describe the axioms and assumptions of utility theory with respect to expected return and risk, and describe its application to the mean-variance portfolio theory.

E. Performance Measures

1. Calculate the Sharpe ratio and Jensen's Alpha, and interpret the results.
2. Identify and describe risk adjusted performance measures, in particular RAROC, RORAC, RARORAC, RoVaR, and the Treynor, Information, and Omega ratios, and the Sortino and Kappa indices.
3. Calculate value-at-risk (VaR) for a portfolio.

F. The Term Structure of Interest Rates

1. Define the term structure of interest rates and demonstrate how to construct a yield curve from observable bond pricing.
2. Describe the standard theories used to explain the observed shape of the yield curve: a) pure expectations theory, b) liquidity preference theory, c) preferred habitat theory, and 4) market segmentation theory.
3. Understand the concepts of duration and convexity, and describe the impact of an embedded call or put on the duration convexity and the price of a bond.

4. Compare and contrast the Ho-Lee, Hull-White, and Black-Derman-Toy models.

G. Regulatory Frameworks

1. Compare and contrast capital management and regulatory capital and relate capital management to solvency and Basel.
2. Describe the application of an internal capital adequacy process to achieve efficient capital allocation.

H. Trade Terminology

1. Illustrate the best choice of available options to execute trading for optimization of return.
2. Describe the lifecycle of a trade and distinguish between dealing and settlement.

II. FINANCIAL INSTRUMENTS

A. Bonds

1. Understand the characteristics of bonds, using concepts of duration, convexity, and yield.
2. Price different types of bonds (e.g., zero coupon, fixed/floating, investment/non-investment grade, etc.)

B. Forward and Futures Contracts

1. Understand the relationship between spot and forward prices.
2. Value a forward contract using concepts of interest differential and delivery cost.
3. Understand the standardized characteristics of futures contract, for bonds, stocks, currencies, and commodities.

C. Swaps

1. Understand the key components of a swap agreement and value a vanilla interest rate swap.
2. Understand features of various types of swaps on instruments (e.g., currencies, bonds, equities, commodities, assets, etc.)

D. Options

1. Identify and understand the components of option valuation.
2. Verify an option price using a given methodology (e.g., binomial models, Black-Scholes-Merton, etc.)
3. Identify different option trading strategies.

E. Credit Derivatives

1. Apply the concepts of default probability and loss given default in determining a credit default swap premium.
2. Understand different types of credit derivatives and securitized products.

F. Hedging Strategies

1. Understand hedging strategies for specific risk exposures within a portfolio.
2. Calculate hedge ratios using cash instruments or derivatives (e.g., forwards, futures, swaps, and options.)

III. FINANCIAL MARKETS

A. Participants in and the Structure of Financial Markets

1. Define and describe the various participants within financial markets (e.g., banks, brokers, front/middle/back office, underwriter, participants, etc.)
2. Discuss the structure of financial markets.
3. Distinguish between the various markets (e.g., bonds, FX, stocks, etc.), trading systems (e.g., over-the-counter (OTC), ECN, "open cry", etc.), and settlement processes (e.g., straight-through).
4. Assess and analyze the capital structure of entities.

B. Bond Markets

1. Define and describe the characteristics of bond markets.
2. Interpret how an agency rating impacts the spread.

C. Money Market Securities

1. Define and describe money market securities (e.g., T-bills, CDs, CPs, BA, etc.).
2. Discuss significant funding rates (e.g., Euro Interbank Offered Rate (Euribor), London Interbank Offered Rate (LIBOR), Overnight Index Swap (OIS), and Euro Over Night Index Average (EONIA).)
3. Calculate the bond equivalent yield of money market securities.

D. Stock Market

1. Define and describe the characteristics of stock markets.

E. Foreign Exchange Markets

1. Discuss foreign exchange markets (both spot and forward) and describe various characteristics of these markets.
2. Calculate and interpret the cross rate given two FX rates.

F. Energy Markets

1. Define and describe the various elements of energy markets, including emerging energy markets.

G. Commodities Markets

1. Define and describe the various elements of commodities markets and the distinguishing features of these markets.

H. Real Estate Evaluation

1. Describe different sectors within real estate (e.g., commercial, industrial, residential) and outline risks associated with lending or investing in real estate.

I. Futures Markets

1. Discuss the rationale for futures markets and describe the settlement and clearing processes.

IV. MATHEMATICAL FOUNDATIONS OF RISK MEASUREMENT

A. Algebraic Methods

1. Solve equations using algebraic methods (e.g., linear and quadratic equations).

B. Calculus Methods Related to Risk Management

1. Apply calculus methods (e.g., exponential and integration, approximation, differentiation, stochastic, etc.) to risk management.

C. Basic Statistics Related to Risk Management

1. Compute and interpret basic statistical measures relating to risk management (e.g., mean, standard deviation, kurtosis, correlation, etc.).
2. Understand the application of extreme value theory.

D. Numerical Methods

1. Discuss, calculate, and interpret various optimization and numerical methods (e.g., LaGrange, Newton-Raphson, Monte Carlo simulation, Multi-state Markov model, etc.).

E. Matrix Algebra

1. Understand and apply matrix algebra as it relates to risk management (e.g., Cholesky decomposition, etc.).
2. Calculate and interpret principal components analysis (PCA).
3. Solve linear simultaneous equations using matrix algebra.

F. Probability Theory in Finance

1. Understand probability theory including Bayesian theory.
2. Calculate, apply, and interpret probability distributions (e.g., normal, lognormal, Poisson, Copula, probit, and logit models).

G. Regression Analysis in Finance

1. Understand and interpret time series, simple, and multiple linear regression.
2. Apply confidence intervals and hypothesis testing.

H. Compounding Methods

1. Use compounding methods (continuous and discrete) and describe the differences between the two.

V. RISK MANAGEMENT FRAMEWORKS AND OPERATIONAL RISK

A. Risk Governance

1. Understand key organizational roles and responsibility for risk decision-making and challenges.
2. Describe the role of the risk function and leadership in ensuring the success of the risk framework through the support of risk culture.
3. Evaluate the effectiveness of governance structures, including the role of external stakeholders (regulators, auditors, shareholders, rating agencies, etc.).

B. Risk Management Framework

1. Identify the key components of a risk framework including policies, appetite, culture, limits, and thresholds.
2. Describe how a risk management framework supports an enterprise-wide participation in risk management.
3. Differentiate between expected loss appetite versus tolerance and capacity for stress losses.
4. Apply strategies for managing risk exposure.

C. Risk Assessment

1. Identify the key steps in a risk assessment lifecycle.
2. Categorize operational risk into its sub-components, including causes and effects.
3. Understand different methodologies for measuring and quantifying operational risks.

D. Risk Information

1. Evaluate relevant measures to identify and analyze loss experience.
2. Understand the key steps in a loss investigation.
3. Be able to identify, select, and implement appropriate key risk indicators and articulate a risk profile.

E. Risk Modeling

1. Evaluate the use of internal and external data in operational risk modeling.
2. Understand the relationship between frequency and severity in loss modeling.
3. Use modeling techniques to price risk and assess the value of risk transfer (e.g., insurance).

VI. CREDIT RISK AND COUNTERPARTY CREDIT RISK

A. Classic Credit Life Cycle

1. Describe the entire credit life cycle from origination to repayment.

B. Classic Credit Products

1. Describe credit markets and credit instruments.
2. Analyze and describe the credit risk taxonomy.

C. Classic Credit Risk Methodology

1. Analyze, compare, and contrast credit risk evaluation methodologies.

D. Counterparty Risk

1. Explain counterparty risk.
2. Measure counterparty exposure and interpret risk appetite.

E. Credit Derivatives and Securitization

1. Outline how credit derivatives and securitization are used as a funding risk management tool.

F. Credit Portfolio Management

1. Recognize credit portfolio management goals and philosophy.
2. Define commonly used credit portfolio management metrics and describe how these metrics are used in practice.

G. Credit Risk Modeling

1. Understand and interpret credit risk models, including Credit Metrics™ and Moody's KMV™.

H. Valuation Adjustments (XVA)

1. Calculate and interpret various value adjustments (e.g., credit (CVA), funding (FVA), debit (DVA), margin (MVA), etc.)
2. Describe right- and wrong-way risk, and the role of the Central Clearing Counterparties (CCPs).

I. Leverage Ratio

1. Calculate and interpret leverage ratio.

J. Risk Mitigation

1. Describe the tools and methodologies used to mitigate credit risk.

VII. MARKET RISK, ASSET LIABILITY MANAGEMENT AND FUNDS TRANSFER PRICING

A. Asset Liability Management

1. Understand the framework and governance processes for managing liquidity and funding risk.
2. Determine the efficiency of capital and funding sources, and the use of the balance sheet.

B. Liquidity Risk

1. Understand and interpret the matching of asset and liability maturities.
2. Define and calculate liquidity indicators and ratios.
3. Identify the key components of liquidity assessment and contingency funding plans.

C. Interest Rate Risk

1. Compare interest rate risk management for a trading book versus banking book structures.
2. Calculate specific measures of interest rate risk at different points in the yield curve.

D. Market Risk Management and Stress Testing

1. Identify the components of market risk policy, limit setting frameworks, and how management action triggers are designed to work.
2. Define stress testing techniques for trading exposures (e.g., FX, interest rate, equity commodity) with different levels of market liquidity.

E. Market Risk Monitoring

1. Compare and contrast different risk monitoring techniques (e.g., gross/net exposure, concentration measure, value at risk (VaR), stress VaR, expected shortfall, etc.)
2. Calculate a simple VaR measure.

VIII. CASE STUDY PRACTICUM

A. Risk Taxonomy

1. Interpret specific scenarios to identify areas of risks according to the following risk taxonomy.
 - a) Financial risks
 - (1) Market Risk (Equity price risk, Interest rate risk, Foreign exchange risk, Commodity price risk)
 - (2) Credit Risk (Transaction risk and portfolio concentration)
 - b) Liquidity Risk
 - c) Operational Risk
 - (1) People risk
 - (2) Process risk
 - (3) Systems and technology risk
 - (4) External events
 - d) Legal and regulatory risk
 - e) Business, Strategic, and Reputational risk

B. Historical Case Studies

1. Compare and contrast the scenario environment against case studies and the lessons learned from those documented cases.
2. Examine the symptoms and causes from specific case studies and apply these to the scenario.

IX. PRMIA STANDARDS AND GOVERNANCE

A. Group of Thirty Best Practices

1. Describe the Group of Thirty Best Practice recommendations and how they may be applied in risk management.

B. PRMIA Governance Principles and Bylaws

1. Define the PRMIA Governance Principles and describe the application of the principles.
2. Describe the PRMIA Bylaws.

C. PRMIA Code of Conduct and Ethics

1. Define and describe the PRMIA Professional Standards, Code of Conduct, and Guidance on Ethical Behavior, and understand how these shall be applied in professional practice.



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