# INSERT COVER

"We require from buildings,
as from men,
**two kinds of goodness;**

First, doing their practical duty;
then that they
**be graceful and pleasing**
in doing it."

~ John Ruskin
The Seven Lamps of Architecture

ARCHITECT EXAM PREP PRESENTS

# PRACTICE MANAGEMENT

SECOND EDITION (GEN 2) – ARE 5.0

**David Doucette**
RA, LEED AP, NCARB

**Eric Corey Freed**
RA, LEED Fellow, Hon. FIGP

PcM

ARCHITECT exam PREP

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# TABLE OF CONTENTS

## FRONT MATTER – Background

## Practice Management Topics

## MODULE 1 – Business Operations                          (20-26% of total exam)

In this module you'll need to understand that running a business requires attention to staffing, regulations, insurance, ethics, and the appropriate Standard of Care.

# TABLE OF CONTENTS

## MODULE 2 – **Finances, Risk, & Development of Practice**  (29-35% of total exam)

This module is about how running and developing a practice requires attention to finances, mitigating risk and liability, and negotiating services and contracts. This is the largest section within the Practice Management division.

## MODULE 3 – **Practice-Wide Delivery of Services**        (22-28% of total exam)

In this module, you'll need to look at projects in the context of their impact on the overall running of a practice.

## MODULE 4 – **Practice Methodologies**                 (17-23% of total exam)

In this module, you'll analyze how a practice is structured to achieve their goals and how to coordinate various projects and services within a practice.

## APPENDICES – **Resources**

# FRONT MATTER

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This guide was created because both of us are teachers at heart.  Utilizing the latest technology and our proven teaching methods, we saw an opportunity to create the most comprehensive, user-friendly, current, and interactive training program available – and that's exactly what we did.  Through the use of our clear and concise study guides, workbooks, flashcards, audio companion, online exam simulators, podcasts, blog, and video tips, you'll gain more knowledge, become more engaged, and have more fun throughout the entire process.  Remember, the journey is the reward.

We are constantly improving and tweaking our study guides and welcome your feedback.  Send your comments, suggestions, and compliments to us at:  **comments@ArchitectExamPrep.com.**

# ABOUT THE AUTHORS

## David Doucette

David Doucette, RA, LEED AP, is founder of Architect Exam Prep and CSE Prep and has been helping candidates successfully prepare for and pass the California Supplemental Exam (CSE) for the last four years. He also hosts a podcast dedicated to preparing for the California Supplemental Exam as well as CSE Video Tips at CSEprep.com.

David received a professional Bachelors of Architecture from the Boston Architectural College (BAC). After working in Boston for eight years, David moved to New York City where he worked for two years. In 2000, he relocated to Los Angeles and worked with Dennis Gibbens Architect, specializing in high end residential design. David established his own firm in 2002 and, after receiving his California architect's license in 2006, he created Reside Architecture that included the implementation of a design/build model for three years in which he achieved a Silver LEED rating for a major remodel to an existing residence in West Hollywood, California.

He is a licensed architect, general contractor, and real estate broker in the State of California as well as a licensed architect in New York and Nevada. David lives on the Westside of Los Angeles with his two boys. He enjoys social media, hiking, backpacking, rock climbing, scuba diving, sailing, and running marathons.

Follow David on Instagram **@lens.of.david +** @**ArchitectPrep**
Follow David on Snapchat **@ArchitectPrep**
Follow David on Twitter **@ArchitectPrep**

## Eric Corey Freed

Eric Corey Freed, RA, LEED Fellow, Hon. FIGP, is Founding Principal of organicARCHITECT, a visionary design leader in biophilic and regenerative design. As a licensed architect, Eric brings over 25 years of experience helping architects, builders and homeowners use sustainability to improve the design and operational savings for thousands of buildings around the country.

Eric is the author of 11 books, including *"Green Building & Remodeling for Dummies"*, and *"Sustainable School Architecture."* His how-to book, *"Green$ense for your Home"* won the 2011 Outstanding Book Award from the American Society of Journalists and Authors.

Eric is considered a leader in the field; named " Best Green Architect" in 2005 and "Best Visionary" in 2007 by San Francisco Magazine and "Green Visionary" by 7x7 Magazine in 2008. In 2012, he was named one of the 25 "Best Green Architecture Firms" in the U.S., and one of the "Top 10 Most Influential Green Architects." He also holds a prestigious LEED Fellow award from the U.S. Green Building Council.

Unlike David, Eric only runs when he is being chased by wolves and prefers drawing to rock climbing.

Follow Eric on Twitter **@ericcoreyfreed**

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## HOW TO USE THIS STUDY GUIDE

Welcome to the **Practice Management (PcM)** Study Guide.  To best prepare for your exam, you should pair this study guide with our exam simulator and flashcards; however, we suggest studying for each portion individually in order to best focus your efforts.

The Study Guide, flashcards and exam simulator are designed to prepare you for the exam.

## PRINTING TIPS & INSTRUCTIONS

This study guide has been designed to be viewed on your screen, or printed.  In addition you can print it in either black & white or color and either single or double-sided.  We've already formatted it for you to print on a standard printer, and we think it works best printed double-sided.

No need to waste paper, right?!  Simply look for the "Two-Sided" option in your print dialog box:
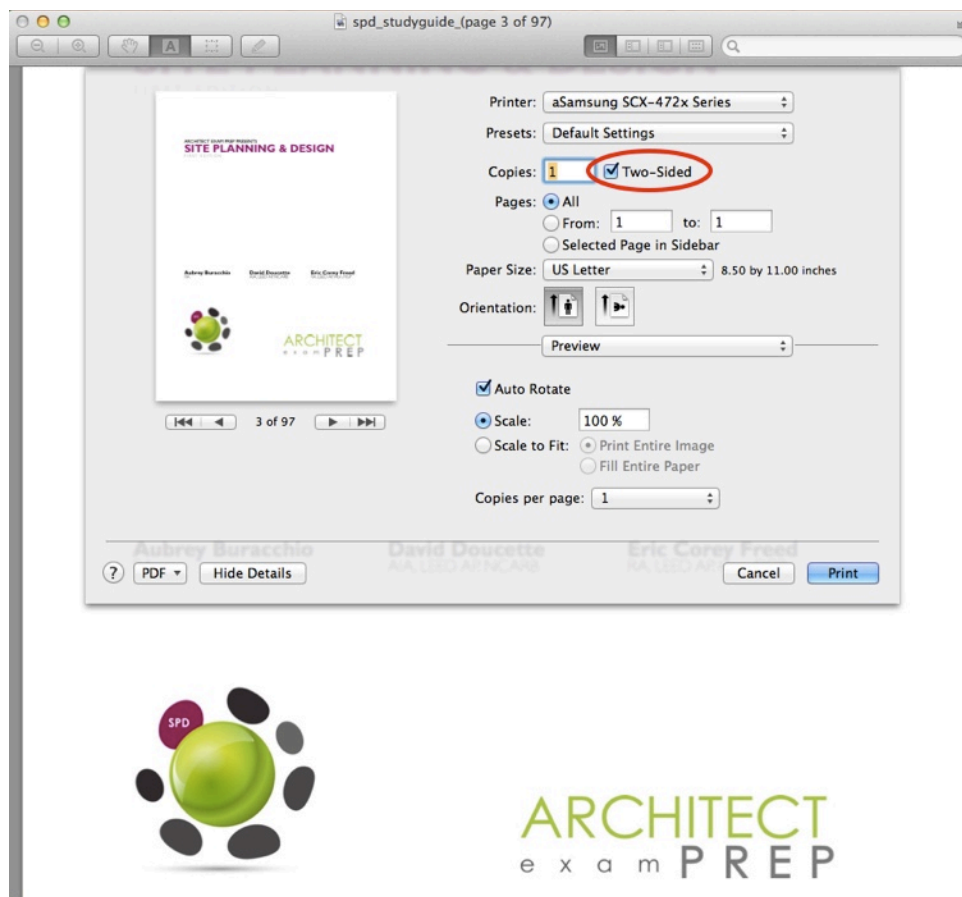
# ABOUT THE ARCHITECT REGISTRATION EXAM® v5.0

Excerpted from NCARB's own description of the ARE 5.0:

*"The Architect Registration Examination® (ARE®) is developed by the National Council of Architectural Registration Boards (NCARB). The ARE is used by U.S. jurisdictions as the registration examination for candidates seeking architectural registration. It is also accepted by select Canadian provincial and territorial architectural associations for registration.*

*The ARE assesses a candidate's knowledge and skills to provide various services required in the practice of architecture. No single examination can test for competency in all aspects of architectural practice; the ARE is not intended for that purpose. The ARE concentrates on the professional services that affect the public's health, safety, and welfare.*

*The ARE assesses a candidate's qualifications in exercising the skills and judgment of a generalist working with numerous specialists. In short, the objective is to reflect the practice of architecture as an integrated whole."*

# UNDERSTANDING WHAT'S NEW IN THE ARE 5.0

Unlike older versions of the Architect Registration Exam (or ARE for short), version 5.0 no longer has vignettes. In addition, the new 5.0 no longer is simply just a collection of multiple-choice questions organized around a main topic (like site planning). The new 5.0 is broken into the actual phases of architectural practice. So you'll be asked about the initial design considerations for the site in the same exam as questions around initial considerations for mechanical systems. This more closely resembles actual practice and is an improvement over the silos of past versions of the ARE.

Instead of vignettes, the entire exam consists of three types of problem questions:

**Multiple Choice:** Similar to the past traditional questions, the multiple-choice questions are designed to test how you apply the knowledge and understand the concepts.

**Drag and Place:** You will be presented with a detail, section, or plan and will be asked to move an item into the correct location, showing how you analyze details.

**Hot Spot:** You will be presented with a diagram and be asked to click on a specific area, showing your understanding of the information.

In fact, instead of "questions" NCARB refers to each as "items" since some are in multiple-choice format and others are in these new formats. Items are not weighted and there is no curve. Not answering a question is the same as answering it incorrectly.

The items are designed to use one of two levels to designate the appropriate cognitive complexity of each objective: Understand/Apply (U/A) and Analyze/Evaluate (A/E):

**Understand/Apply:** Deduction of meaning from information, demonstration of comprehension of concepts or processes, application of processes, or procedures in familiar or unfamiliar situations.

**Analyze/Evaluate:** Reduction of overall concept into component parts, determination of how parts relate to one another and to the overall structure, arrival at judgments based on given criteria.

You may also be presented one or two case study examples of a project and receive several questions in a row about that specific case study. Feel free to use your scratch paper to make notes, and expect to apply your knowledge across various topics. You don't need to memorize it, but focus on the resources they have provided. Case studies typically come near the end of the exam.

In short, the ARE is similar to the bar exam lawyers must take to get their license. NCARB produced the first nationally recognized exam back in 1965. The exam has changed greatly over the years. Though licensing requirements vary slightly from state to state, there are six exam sections that every candidate must take, but you can take them in any order:

### Practice Management (PcM)                                    (Hey! That's the exam you're taking!)
Candidates must demonstrate an understanding of and abilities in business structure, business development, and asset development and protection.
**WHAT IT REALLY COVERS:** What it takes to run a firm.

### Project Management (PjM)
Candidates must demonstrate an understanding of and abilities in quality control, project team configuration, and project scheduling. In addition, candidates must demonstrate the ability to establish and deliver project services per contractual requirements in collaboration with Consultants.
**WHAT IT REALLY COVERS:** What it takes to run a successful project.

### Programming & Analysis (PA)
Candidates must demonstrate an understanding of and abilities in project type analysis, the establishment of qualitative and quantitative project requirements, evaluation of project site and context, and assessment of economic issues.
**WHAT IT REALLY COVERS:** How you research, evaluate, analyze and understand the design problem.

### Project Planning & Design (PPD)
Candidates must demonstrate an understanding of and abilities in design concepts, sustainability/ environmental design, universal design, and other forms of governing codes and regulations.
**WHAT IT REALLY COVERS:** Schematic Design Phase, think in terms of ⅛-inch and ¼-inch scale drawings like plan, section and elevation, with a little bit of Design Development thrown in.

### Project Development & Documentation (PDD)
Candidates must demonstrate an understanding of and abilities in integration of civil, structural, mechanical, electrical, plumbing, and specialty systems into overall project design and documentation.
**WHAT IT REALLY COVERS:** The end of Design Development and through the Construction Document phases – think about it as the issues you face when doing detail drawings at ½-inch, 1-inch, and larger.

### Construction & Evaluation (CE)
Candidates must demonstrate an understanding of and abilities in construction contract execution, construction support services (including construction observation and shop drawing or submittal review), payment request processing, and project closeout. In addition, candidates must also demonstrate an understanding and abilities in project evaluation of integrated building systems and their performance.
**WHAT IT REALLY COVERS:** The Construction Phase, and what you need to successfully reach the end of the construction.

Since the divisions mirror the phases of construction, it's critical to always remember what "phase" you're in and think about your answer in that context. For instance, you make different decisions in Schematic Design than you do during Construction Documentation.

## SCHEDULING (OR RESCHEDULING) YOUR EXAM

Each division of the exam costs $235 (that's $1410 for all 6).  Appointments cannot be cancelled but they can be rescheduled up to three business days before your appointment.  If you wait until 3-30 days before your appointment, they will charge you $60-80 to reschedule (rescheduling is free if done in advance by 30 or more business days).

In Fall of 2013, NCARB launched their new "My Examination" portal to allow candidates to schedule exams, update personal information, receive electronic score reports, and view your rolling clock.  Visit ncarb.org and log in to view your My Examination page and schedule your test.

## ARE 5.0 OVERVIEW CHARTS

Here's a quick overview of your journey, showing each division, including the number of items and the time allotted to complete each Exam and your entire appointment.  Don't freak out!  Take one exam at a time.

| 5.0 DIVISION | ITEMS | TEST DURATION | APPOINTMENT DURATION * |
|---|---|---|---|
| Practice Management | 80 | 2 hr 45 min | 3 hr 30 min |
| Project Management | 95 | 3 hr 15 min | 4 hr 0 min |
| Programing & Analysis | 95 | 3 hr 15 min | 4 hr 0 min |
| Project Planning & Design | 120 | 4 hr 15 min | 5 hr 0 min |
| Project Development & Documentation | 120 | 4 hr 15 min | 5 hr 0 min |
| Construction & Evaluation | 95 | 3 hr 15 min | 4 hr 0 min |

* Appointments allow for introductory screens, a break if you choose, and closing screens.

# PREPARING FOR YOUR EXAM

NCARB provides free study guides for all six sections of the ARE. They are available for download from www.ncarb.org. While helpful, these free guides are not comprehensive enough for you to study alone and expect to pass the exams. This study guide is designed to complement and enhance those NCARB guides and help you pass the test.

We recommend the following prescription to ensure you walk into the testing center relaxed and confident in your knowledge of the material:

- Study for one exam at a time.
- Always keep in mind which division you are taking and answer in terms of that "phase" for which you are being tested.
- Set aside a fixed time each day to study, even if it is only for a half hour.
- Certain material will come easy to you; other parts will be harder for you to remember. Don't dwell on the things you already know. Use these guides to study the stuff you don't know well.
- Pull out your old notes from architecture school. You learned this information once, and your notes in your handwriting will help you re-learn it.
- Study with a partner. Quiz each other and hold each other accountable to meet regularly.
- Once you feel ready, schedule your exam appointment. That looming deadline will help motivate you to study.
- Finally, take advantage of our free podcasts and tutorials online at: www.ArchitectExamPrep.com.

# TAKING THE EXAM

### What to Bring

You must bring a valid state or federal ID that contains both your photo and a signature. State driver's license or ID cards work best, but you can also bring a passport along with another ID that has a signature. Work ID cards are not considered acceptable.

You are not allowed to bring in any books, notes, calculators, or even pens into the testing room. Leave them at home. They will provide scratch paper and pencils for you, but you must leave it behind in the testing room. There is an on-screen calculator in the software if you need it.

Most (not all) testing centers provide lockers for your coat, keys and belongings.

Be prepared to shut down your cell phone once you are ready to step into the test center and leave it powered off until you have left the test center. Accessing your cell phone or any electronic device while in the test center can lead to disciplinary action. You're at a secure test center to test so be ready to disconnect from the world.

### Arriving at the Test Center

Map out the location to the testing center ahead of time so you know where you're going. Plan to arrive at least 30 minutes early. If you get there early, use that time to glance at some of the formulas or topics you need to review one last time. Then leave your notes and books in the car.

Relax, take a few deep breaths and go in and take the exam. Check in with the attendant and show them your Authorization to Test. Don't forget it as you'll need it for each exam.

As soon as you are seated in the testing room, use the scratch paper to dump any formulas, ratios, or facts you crammed at the last minute and were worried you'd forget. This will also help you relax.

Once the exam begins, there is a short tutorial explaining how the software works. Read through it for your first exam, and you can probably skip it in the future.

### Multiple-Choice Test Tips

The ARE multiple-choice exams typically include several types of questions.  Although you may think otherwise, there are no trick questions!  Every question counts the same toward your total score.

Many questions will ask you to respond based on a drawing or photograph.  Look carefully, but don't overthink it.

Other questions will list four or five statements, and you have to choose the ones that are true.  Read through all of them first and start to eliminate statements to arrive at the answer.

Finally, there are the typical "fill in the blank" and "choose which apply" types of questions.  In all cases, remember that you are not just there to parrot back information.  You have to look carefully at the questions and determine the correct answer(s).

Generally speaking, you'll have plenty of time to answer the questions.  Use the time to review the questions before you answer.  Don't be afraid to skip questions that take too long.  You can mark them and go back and answer them later.  Once you go through the exam once, go through it again to check your answers.  Random clicks, tired eyes and nerves can often lead you to click the wrong answer.  You have the time, so use it to answer everything and to check your work.

If you have any technical problems during the exam, raise your hand and notify the test center staff. Ask the staff person to report the technical issue to NCARB so that your case is documented.

### After the Exam

Unanswered items are marked as incorrect.  So before you complete the exam, run through it again.  Once you've gone through all of the multiple choice questions and gone back to answer the items you've skipped, the software will ask you to fill out an exit survey.  It will tell you when you are finished and may leave.  Turn in your scratch paper (nothing can be taken out of the testing site).

If you had any problems during the exam, you must report them to NCARB as soon as possible.  After ten days, NCARB will not listen to your complaint.

You'll be able to see preliminary results in the test center after you complete the survey. Your official results will post in your NCARB Record between 1 - 7 days after you test depending on your jurisdiction. You can print out a copy of your score report from your NCARB Record.

### Never Give Up

The most importance piece of advice we can give in this entire process is to never give up.  All successful people have had setbacks but it is the perseverance that has driven them to achieve success.  As **Thomas Edison** so poignantly put it:

## "Our greatest weakness lies in giving up. The most certain way to succeed is always to try just one more time."

And we're here to help you the whole way.

**DAY OF TEST CHECKLIST**

☐ Arrive 30 minutes early     ☐ Valid photo ID

☐ Bring two forms of ID     ☐ Plenty of rest

☐ Authorization to Test     ☐ Healthy breakfast

✖ DO NOT BRING:     ✖ DO NOT BRING:
✖ **scratch paper**     ✖ **notes**

✖ DO NOT BRING:     ✖ DO NOT BRING:
✖ **books**     ✖ **calculator**

**PRACTICE MANAGEMENT DIVISION FORMAT**

| YOU'RE HERE... | HAVING TO ANSWER | IN THIS TIME | FOR THIS APPOINTMENT DURATION * |
|---|---|---|---|
| Practice Management | **80** | 2 hr 45 min | 3 hr 30 min |

\* Appointments allow for introductory screens, a break if you choose, and closing screens.

That's about **2** minutes and **4** seconds per item, but:

If you set aside **5** minutes for each of the **20** CASE STUDY problems...

...that leaves **1** minute and **5** seconds per remaining item.

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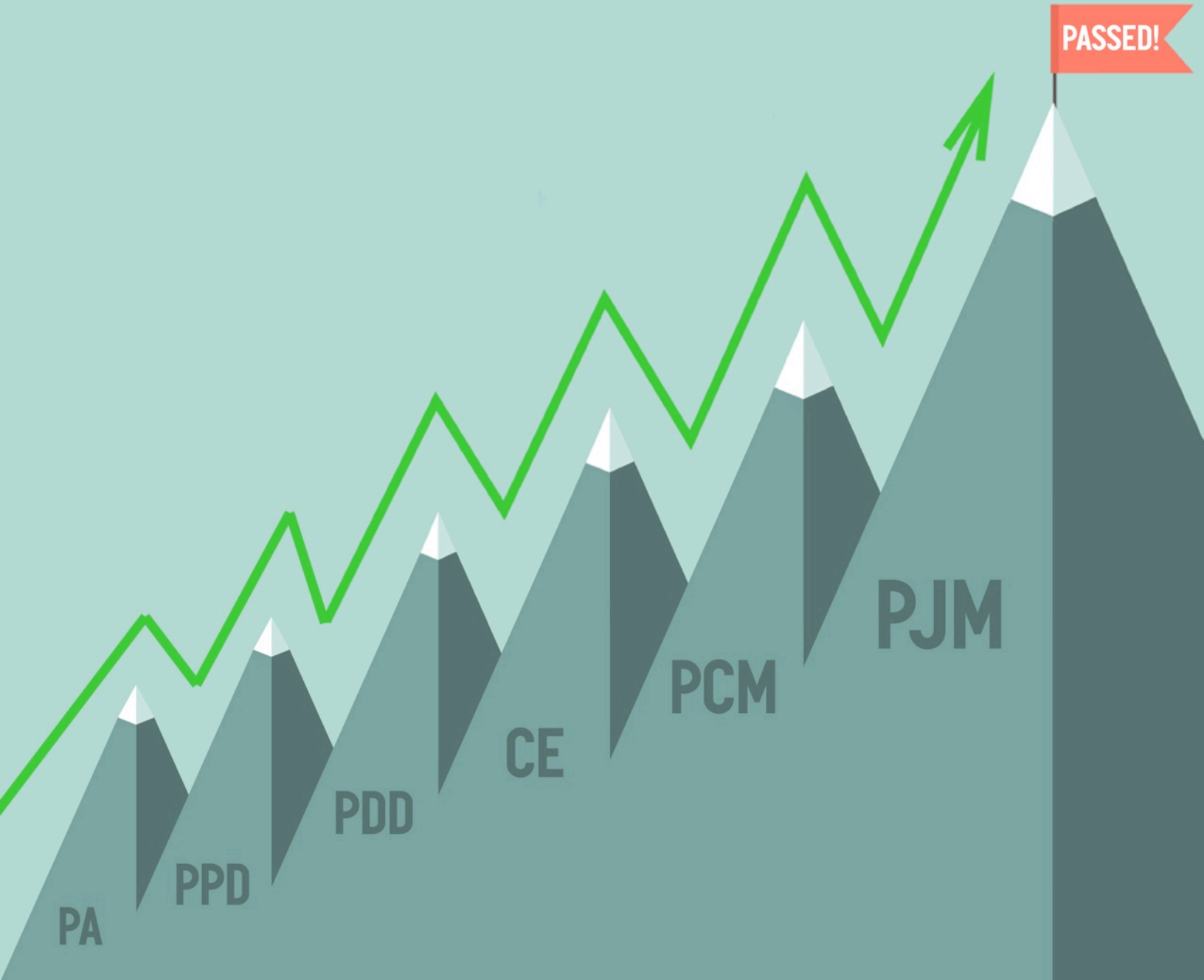
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