



F E E X A M R E V I E W

User Guide and Instructions

CD-ROM

Version 3.0

ASCE
American Society of Civil Engineers

SmartPros
ENGINEERING

TABLE OF CONTENTS

o 1.0 Overview	1
o About this Product!	2
o What is the FE Exam?	3
o What is the FE Exam Refresher Course?	3
o Subjects Covered in the Course	4
o 2.0 Getting Started	4
o Minimum System Requirements	4
o Launching the Course	4
o 3.0 Using the Course	6
o Starting a Course Section	6
o Viewing the Course	7
o Controlling the Course	7
o 4.0 Taking a Review Quiz	9
o 5.0 Taking the Practice Exam	10
o 6.0 Technical Support	11
o 7.0 About SmartPros	11
o 8.0 Licensing	12

1.0 OVERVIEW

About this Product

The FE Exam Review product is an all inclusive review product for preparing for the FE exam. You can go through each of the 13 instructor led sections in any order and at your own pace! You have purchased a license to use this material for one full year and have access to both the CDROM and the online Review product. To take the practice tests you will need to go online which launches automatically as described in this manual.

Quizzes: At the end of each section you will be given a set of quiz questions. These questions are to test your grasp of the study section you just completed. If you answer the multiple choice question incorrectly, you will be told the correct answer and given the solution to the problem.

Practice Exam:: At any time you can click on the "Practice Exam" and take a representative test. You will be launched online to our website testing engine. Time yourself for one hour and complete as many of the questions as you can in that period of time. You will be able to go back and check any of the questions you skipped if you still have time.

Practice Exam Scoring: At the end of an hour (even if you have not completed all the questions) get your score. You will not only receive your score but will be guided to the areas of the course you need to focus on again and review.

Practice Exam Questions: You can take the practice exam over and over to see how you are improving your exam skills. Questions are dynamically generated from a database of questions, and each time you take the exam a new set of questions will be generated.

Recording your score: After you have taken the practice exam your score will be recorded in the "courses completed" section of the website. If you take the practice exam several times, your highest score will appear in the "courses completed" section. This sets the benchmark for score you should try to beat!

Reference Handbook: Throughout the exam you will hear references

to the Fundamentals of Engineering (FE) Supplied- Reference Handbook. You may already have this handbook, but it is not necessary to use this while preparing with this product. You will be given the handbook when you go the exam, you may purchase a copy from SmartPros or NCEES, or you can download sections or the entire handbook at no charge on the NCEES.ORG website at; http://www.ncees.org/exams/study_materials/fe_handbook/

What is the FE Exam?

The Fundamentals of Engineering (FE) Exam tests your knowledge on a variety of engineering subjects. The FE Exam is a multiple-choice test divided into two parts, a morning session that covers topics common among the engineering disciplines followed by an afternoon session that covers either general topics or discipline-specific topics.

- o To earn a Professional Engineering license, you must pass a Fundamentals examination.

The NCEES web site (<http://www.ncees.org/exams/fundamentals/need>) contains more information on the FE Exam.

What is the FE Exam Refresher Course?

The FE Exam Refresher Course is an interactive study tool to help you prepare for the FE Exam. In each of the 13 sections, an instructor explains the concepts, equations, and solutions used for problems in both the morning and afternoon portions of the FE Exam. It is ideally suited to the morning FE exam and the afternoon General Engineering and Mechanical Engineering sessions. Supplemental material may be needed or recommended for other afternoon sessions.

The course is not intended to introduce and explain new engineering concepts and methods. Rather it reinforces the concepts and methods with which you are already familiar.

After each section, you are able to take a Review Quiz to see how much you've learned. You can also take a course-encompassing Practice Exam to gauge your overall knowledge.

Subjects Covered in the Course

- o Mathematics
- o Chemistry
- o Material Science (Metallurgy)
- o Ethics and Economy
- o Thermodynamics
- o Fluid Statics
- o Fluid Dynamics
- o Statics
- o Dynamics
- o Strength of Materials
- o Automatic Control
- o Electricity
- o Biology

2.0 GETTING STARTED

System Requirements

CD Version 1.0

- o PC or Mac
- o 8x CD-ROM Drive
- o 300Mhz Processor or Greater
- o 64 MB RAM
- o Monitor Resolution at 800 x 600/Thousands of Colors
- o 50 MB Free Hard Drive space
- o Sound Card

Online Version

- o PC or Mac
- o Internet Connection at speeds of 56k or greater
- o 300Mhz Processor or Greater
- o 64 MB RAM
- o Monitor Resolution at 800 x 600/Thousands of Colors
- o 50 MB Free Hard Drive space
- o Sound Card
- o Microsoft Internet Explorer 5.0 or higher
- o Macromedia FLASH Player 7.0 plug-in

To download the FLASH player for Windows from the Internet:

1. Go to <http://www.macromedia.com/software/flash/>
2. Click the Get Macromedia FLASH Player button.
3. Follow the instructions to download and install the FLASH Player.

Launching the Course

CD Version

The FE Exam Refresher Course should start automatically when you put the CD into your computer's CD drive. If it does not automatically start, follow these steps:

1. Double click My Computer on your Windows Desktop.
2. Double click the CD Drive containing the FE Exam CD.
3. Double click start.exe.

NOTE: If you are already using Macromedia Flash Player 8.0, the FE Exam Refresher Course CD has been updated to be compatible with the new security features Macromedia introduced in this version of the player.

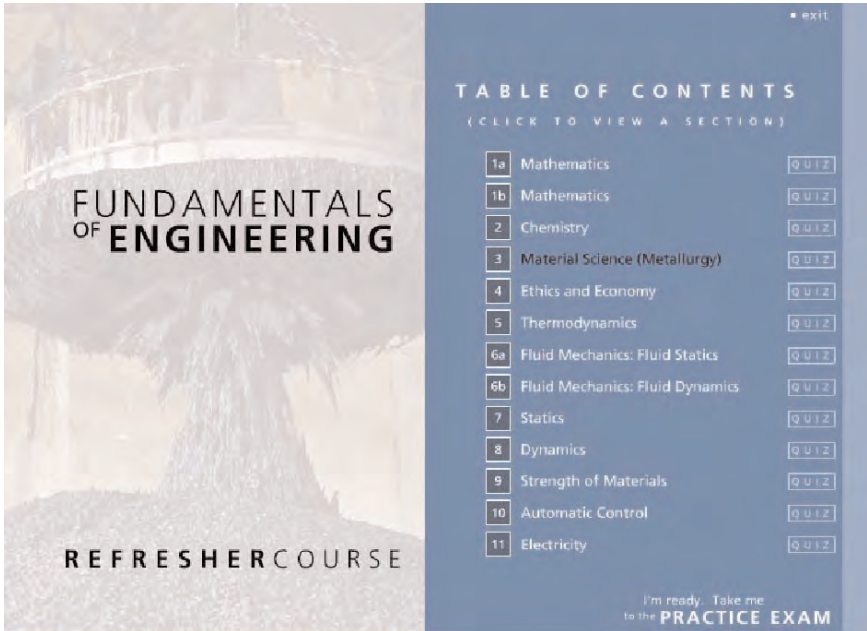
Online Version

The FE Exam Refresher Course can also be purchased and used through the SmartPros Engineering Professional Education Center (PEC) web site. After purchasing the course, you can follow these steps to start the online FE Exam Refresher

1. Go to <http://education.smartpros.com/engineering/>
2. Logon with your username and password.
3. Click My Courses.
4. Click the FE Exam Review link in your list of courses.

3.0 USING THE COURSE

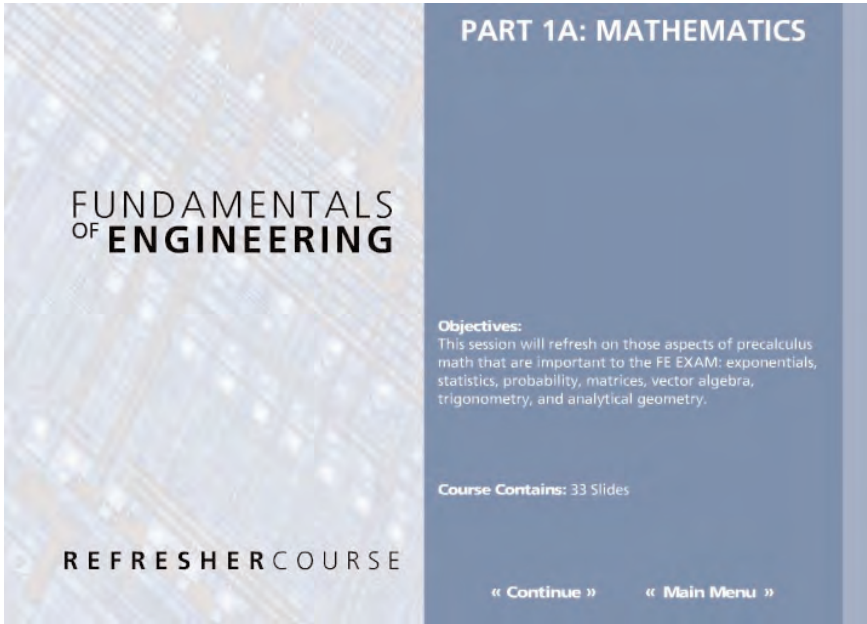
Starting a Course Section



Starting the FE Exam Refresher Course opens the title screen.

- o Click a **Section Title** to start that section.
- o Click a **Quiz** button next to a section to take that section's Review Quiz.
- o Click **Practice Exam** to take the encompassing Practice Exam.
- o Click **Exit** to close the course.

After clicking a section link on the title screen, you see that section's



introduction page, showing you the section objectives.

- o Click **Continue** to proceed to the section's presentation.
- o Click **Main Menu** to return to the title screen.

Controlling the Course

Each section of the FE Exam Refresher Course contains a series of slides with audio explaining the concepts, equations and methods used in solving problems for that subject.

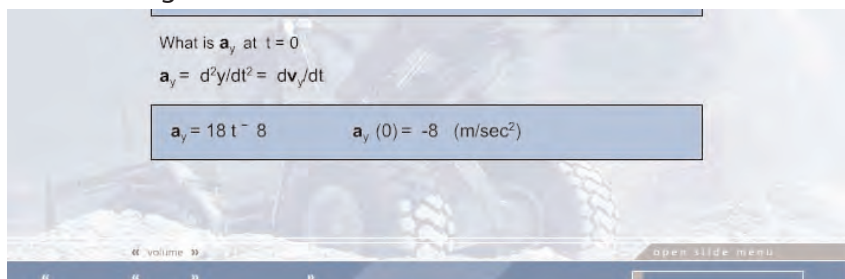
There are three general navigation buttons at the top right of the



page.

- o Click **Exit** to return to the Title Screen.
- o Click **Home** to return to the section's introduction screen.
- o Click **Help** to see a list of keyboard shortcuts.

You can navigate through the slides and control the playback using the following buttons on the bottom of the screen



- o Click the left or right **Volume arrows** to raise or lower the volume.
- o Click **Back** to go back one slide.
- o Click **Forward** to skip forward one slide.
- o Click the **Play/Pause** toggle to play or pause the presentation.
- o Click **Review Quiz** to go to that section's quiz.
- o Click **Open Slide Menu** and then a slide to skip directly to that slide.

4.0 TAKING A REVIEW QUIZ

Each section of the FE Exam Review Refresher Course includes a Review Quiz. You can take a Review Quiz for a section at any time, as many times as you wish.

Click on the **Quiz** link next to the desired section on the title screen to start the quiz. You can also click the **Review Quiz** button in a section to start the quiz. All quizzes are in multiple choice format.

PART 8: DYNAMICS

Review Quiz

To continue, please select an answer for the question below.

Question 9 of 10
If the mass to the left is pulled 1 cm from its equilibrium position, what will be its undamped natural frequency of oscillation (/sec)?

$k = 10\text{N/cm}$

$m = 10\text{kg}$

a) 10
b) 20
c) 100
d) 200

« Back Continue »

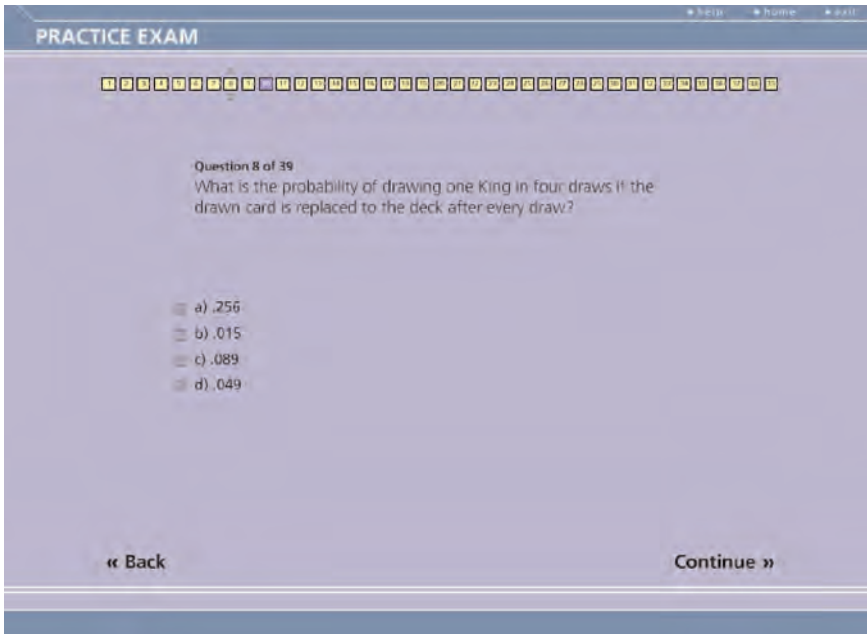
return to slides

- o Click on your answer to see if it is correct.
- o Click the **Back** or **Continue** buttons to navigate through the quiz.
- o Click **Return to Slides** to return to the section's presentation.

5.0 TAKING THE PRACTICE EXAM

The Practice Exam covers material from the entire FE Exam Refresher Course. You may take the Practice Exam as many times as you wish.

Click the **Practice Exam** link on the title screen to begin. Then click **Continue** on the introduction screen to begin the Exam.



Click your answer to choose it. The question number list at the top of the screen will turn blue to indicate that you answered the question.

Use the other buttons on the page to navigate through the Exam.

- o Click **Back** or **Continue** to go to the previous or next question.
- o Click a **Question number** at the top to go to that question.
- o Click **Home** to return to the Practice Exam introduction screen.
- o Click **Exit** to return to the title screen.

Once you've finished the Practice Exam, click **Submit for Scoring** to see how you did.

6.0 TECHNICAL SUPPORT

If you have any problems using the course, please contact Technical Support.

Phone: 914-345-2620 xt. 1177, M- F 9:00 AM - 5 PM EST.

Email: support@smartpros.com.

7.0 ABOUT SMARTPROS

SmartPros Ltd. (formerly Virtual Education Corporation and Keepsmart.com) is a leading provider of Internet, electronic, multi-media training and education solutions. The vision of SmartPros Ltd. is to revolutionize lifelong learning for engineering professionals. SmartPros Ltd. has established alliances with prestigious professional and technical societies and nationally recognized organizations to develop online courses that fulfill continuing professional education (CPE) requirements.

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