FEA ACADEMY
ONLINE LEARNING
IN FINITE ELEMENT ANALYSIS

CONSULTING SERVICES
IN ENGINEERING SIMULATION
SIMULATION EXPERTS

TRAINING & COACHING SERVICES

IN FINITE ELEMENT ANALYSIS

From quick focused training to ongoing expert coaching, FEA Academy gives engineers and teams the skills, strategies, and support to deliver accurate and reliable simulations — every time.

Our training & coaching solutions are suitable for
individuals and companies looking to grow their FEA skills with confidence.

Led by Dominique Madier

25+ years of FEA expertise in aerospace & engineering

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Empower Your FEA Skills with Proven Expertise

At FEA Academy, we believe that mastering Finite Element Analysis is not just about learning theory — it's about gaining the practical skills, confidence, and guidance to solve real engineering challenges.

Whether you are an **individual engineer** seeking to sharpen your skills or a **company** looking to elevate your team's FEA capabilities, our Training and Coaching Programs are designed to deliver measurable results.

Led by **Dominique Madier**, an FEA consultant with over 25 years of experience in structural analysis for leading aerospace and engineering organizations, we combine hands-on instruction, proven methodologies, and personalized support to help you excel.

Flexible Learning Formats

On-demand training and live mentoring sessions tailored to your schedule.

Software-Independent Methods

Focus on universal modeling techniques applicable to any FEA software.

Fixed-Price Options

Predictable costs for individuals and corporate teams alike.

Practical, Results-Driven

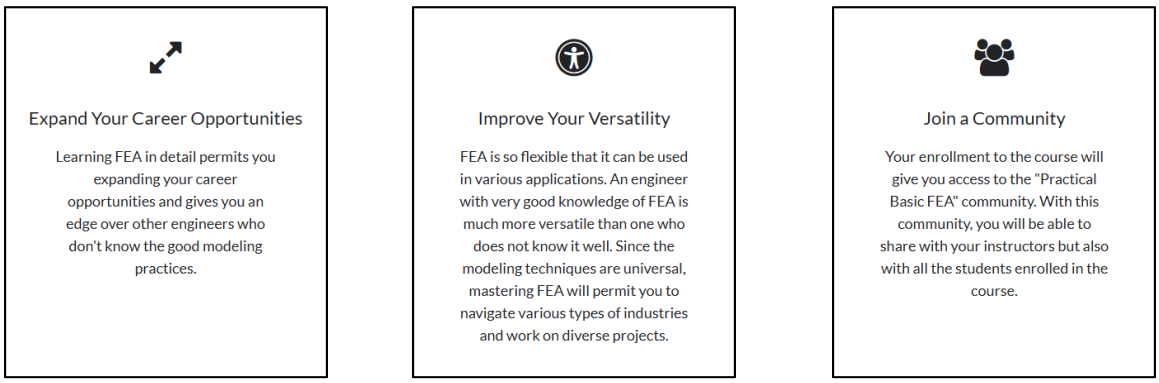
Reduce errors, speed up delivery, and build in-house FEA expertise.

> *Whether your goal is to reduce errors, speed up project delivery, or develop in-house expertise, FEA Academy is your trusted partner in building FEA excellence.*

Option 1: FEA Trainings

Who Is This For?

> *Engineers involved in structural analysis projects who want to deepen their practical knowledge and skills in Finite Element Analysis (FEA), including linear static analysis, linear buckling analysis, modal analysis and nonlinear analysis.*



🏆 Key Benefits

- ✓ **Online, on-demand courses** for flexible learning
- ✓ **Practical FEA skills** for real-world applications
- ✓ **Universal modeling techniques** and best practices
- ✓ **Comprehensive coverage** of linear and nonlinear FEA methodologies
- ✓ **Ask your questions** in the discussions space and get answers from a specialist

What You Get in the FEA Academy Courses

Practical FEA

A complete program teaching you the universal FEA modeling techniques and offering the best practical methods, guidelines and examples.

FEA Workflows

To augment your learning experience, you will have access to software examples showing particular FEA workflows.

Many Simple Examples

All the presented modeling techniques are illustrated with simple examples to permit you understanding all the FEA concepts in detail.

On-Demand Course

Learn at your pace by watching the videos of the course. Access the virtual classroom 24/7 from everywhere, you just need an internet access.

Unlimited Access

You will have an unlimited access to the FEA Academy virtual classroom to revisit the lectures for your day-to-day work.

Keep Track of Your Knowledge

Use our PDF file containing 200+ questions related to each lecture. Also, test yourself to validate your knowledge by answering the quizzes after each lecture.

Download the Slides

Download all the slides of each lecture

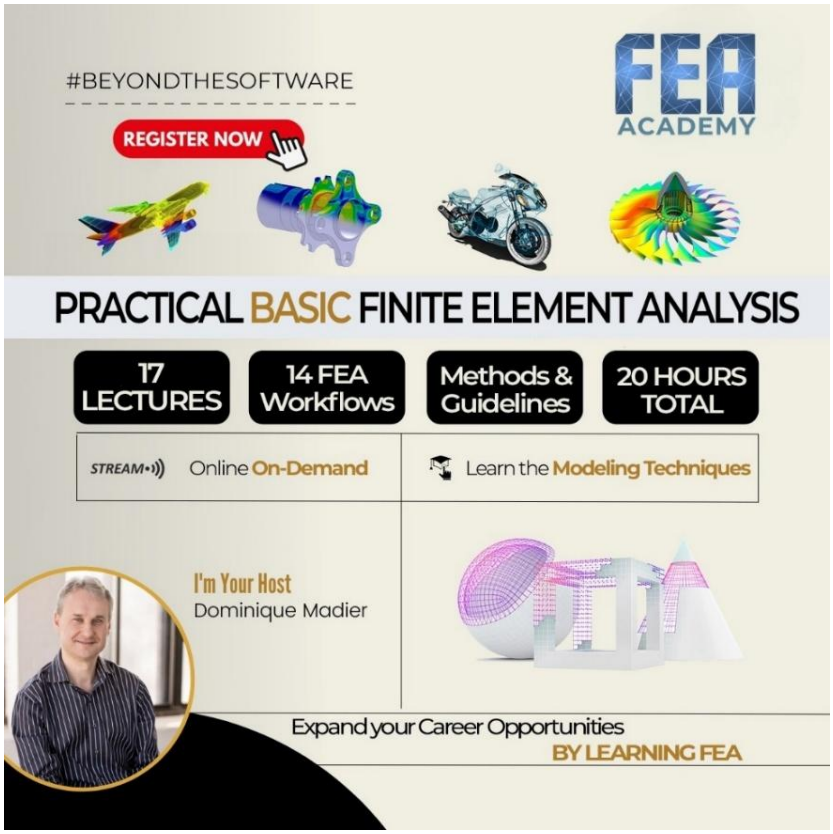
Geometric & Simulation Files

Download the geometric files in Parasolid, Step and IGES formats as well as the simulation files of the examples (150+ files).

Q&A

During this course, your instructors will be available to answer your questions and will support you in order to help you building a strong FEA knowledge.

Practical Basic Finite Element Analysis Course



Learn Modeling Techniques for Linear Static, Linear Buckling and Modal Analysis

You will learn all the FEA methods and guidelines illustrated with many examples.

- 17 online lectures covering 15 hours of training with methods, guidelines and examples
- 14 additional videos with examples showing particular FEA workflows in 5 hours
- 20 hours total of comprehensive content
- Linear Static Analysis, Linear Buckling Analysis, and Modal Analysis
- Watch the videos at your own pace
- Ask your questions in the discussions space

> *A complete program to learn and master the universal FEA modeling techniques that every engineer should know.*

Download the complete curriculum HERE

Practical Nonlinear Finite Element Analysis Course

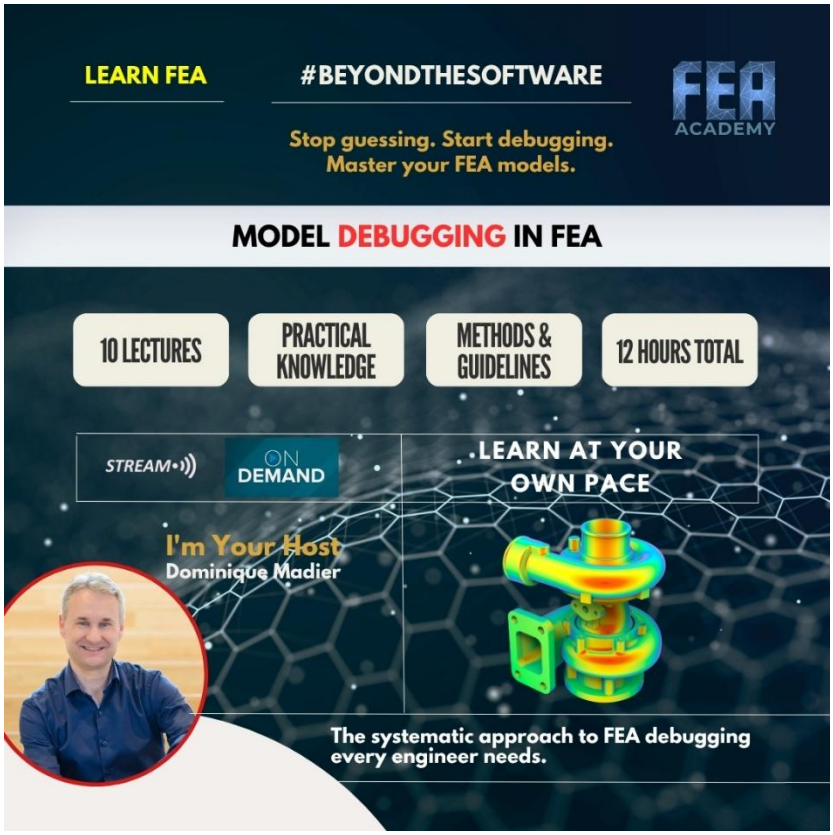
Learn Modeling Techniques for Nonlinear Analysis

You will learn all the FEA methods and guidelines illustrated with many examples.

- 15 online lectures covering 7 hours of training with methods, guidelines and examples
- 17 additional videos with examples showing particular FEA workflows in 5 hours
- 12 hours total of comprehensive content
- Geometric Nonlinearity, Material Nonlinearity, Boundary Nonlinearity
- Solver Methods (Newton-Raphson & Arc-Length Methods)
- Convergence Issues & Solution Strategy, Modeling Contacts, and more
- Watch the videos at your own pace
- Ask your questions in the discussions space

Download the complete curriculum HERE

Model Debugging in FEA Course



Stop guessing. Start diagnosing. Learn the systematic, six-step workflow to identify, diagnose, and resolve errors and convergence failures in your FEA models, taught by two practicing analysts.

Master your FEA Models:

- 10 online lectures covering 12 hours of training
- Hands-on Debugging Exercises
- Download the Checklists & the 24 Diagnostic Reference Cards
- 6 steps Universal Debugging Workflow
- 18 accuracy checks and 3 mathematical checks in the verification toolkit
- Contact diagnostics
- Check energy debugging protocol
- Watch the videos at your own pace
- Ask your questions in the discussions space and get answers from specialists

Download the complete curriculum HERE

Frequently Asked Questions

Q1 – What are the objectives of the FEA Academy courses?

- Provide the most effective practical methods and guidelines for developing and validating finite element models in solid mechanics and structural analysis.
- Equip engineers with the tools to create accurate and reliable models while avoiding common errors.

Q2 – What will FEA Academy deliver through these courses?

- Real, practical knowledge you can apply immediately to solve solid mechanics and structural problems using FEA.
- Focused on day-to-day engineering needs, ensuring relevance and direct applicability.

Q3 – What will these courses enable you to do?

- Confidently perform FEA analyses for your daily engineering tasks.
- Gain a deep understanding of FEA principles to trust and defend your results.

Q4 – What is the prerequisite to attend the courses?

- A solid general physics background.
- Recommended: university-level review of solid mechanics, statics, and strength of materials.

Q5 – Who should attend?

- Engineers aiming to transition into FEA for solid mechanics and structural analysis.
- Engineers seeking a refresher to strengthen their FEA knowledge.
- New graduates eager to learn industry applications of FEA in structural problem-solving.

Q6 – Which FEA software is required or used in the courses?

- No specific software required — courses are software-independent.
- Focus on universal modeling techniques essential for all structural engineers.
- Methods can be applied with any FEA software to produce accurate, reliable simulations.

Pricing

Course	Price
Practical Basic Finite Element Analysis	**US$ 600 / seat**
Practical Nonlinear Finite Element Analysis	**US$ 600 / seat**
Bundle: Basic + Nonlinear FEA (Save 25%)	**US$ 900 / seat**
Model Debugging in FEA	**US$ 500 / seat**
FEA Mastery Bundle: Basic + Nonlinear + Debugging (Save 30%)	**US$ 1200 / seat**

Option 2: Monthly Coaching for Independent Engineers

Who Is This For?

> *Ideal for individuals requiring ongoing support with predictable costs. Best if you want consistent coaching for a single engineer.*

🏆 Key Benefits

- ✓ **Personalized Coaching:** One-on-one support to improve your FEA skills and best practices — at your pace, on your real projects.
- ✓ **Troubleshooting & Debugging:** Solve solver issues, convergence failures, or incorrect results with expert guidance instead of guessing.
- ✓ **Simulation Review:** Remove doubts and gain confidence in your models — get your modeling assumptions and results validated.
- ✓ **Weekly Sessions:** Scheduled live Zoom sessions with Dominique Madier, adapted to your time zone and needs.
- ✓ **Continuous Support:** Convergence issues, boundary conditions, solver settings, and more — hands-on coaching for faster turnaround.
- ✓ **Broad Analysis Coverage:** Linear Static, Linear Buckling, Modal, Nonlinear Static & Frequency Response Analysis.
- ✓ **Hands-on Coaching:** Improve efficiency and master universal, practical FEA techniques.
- ✓ **Faster Turnaround:** Expert guidance to avoid costly mistakes and rework.

> *With every package, you have full access to Dominique Madier for expert guidance and detailed review of your FEA analyses.*

Frequently Asked Questions

Q1 – How are the weekly sessions structured?

Each session is scheduled via Zoom at a time that suits you. You set the agenda — whether it's reviewing a model, debugging convergence issues, or working through a new analysis approach. Sessions are hands-on and tailored entirely to your current projects and goals.

Q2 – Can I switch between Essentials and Expert+ plans?

Yes. You can upgrade from Essentials to Expert+ at any renewal point to add nonlinear and dynamic analysis support as your skills and project demands evolve.

Q3 – What is the minimum commitment for Monthly Coaching?

A minimum of 3 months is required. FEA skill-building is cumulative — this commitment ensures you progress from initial guidance through to independent, confident analysis within a structured timeline.

Q4 – How does the portfolio creation work?

Throughout your coaching engagement, Dominique helps you build a professional engineering analysis portfolio. This includes defining FEA projects, documenting your analyses with proper methodology, presenting results clearly, and demonstrating your technical judgment — a valuable asset for career advancement.

Q5 – What happens if I don't use all my hours in a given month?

Monthly hours are allocated per billing cycle and do not roll over. We recommend scheduling regular sessions to maintain momentum and get the most value from your plan.

Pricing

Our coaching is designed for long-term success. **We require a 3-month minimum commitment** to ensure meaningful progress and measurable results.

Plan	Hours/Month	Essentials	Expert+
		Linear Static Linear Buckling Modal Analysis	Essentials Plan + Nonlinear Analysis Dynamic Analysis
Core	5 hrs	**US$ 180 /hour**	**US$ 280 /hour**
Pro	10 hrs	**US$ 165 /hour**	**US$ 220 /hour**
Elite	15 hrs	**US$ 150 /hour**	**US$ 210 /hour**

Option 3: Corporate Subscription Plans

Who Is This For?

> *The Corporate Subscription Plan is designed for companies that require ongoing access to expert FEA support, coaching, and FEM validation throughout the year. This plan ensures engineers always have a trusted expert on hand without the need for costly one-off consultations or in-house hires.*

- Best for companies with multiple engineers needing FEA coaching & guidance
- Organizations that use FEA regularly but don't have in-house specialists

🏆 Key Benefits

- ✓ **Team-Level Coaching:** Coordinated one-on-one and group sessions aligned to your team's project priorities and skills gaps
- ✓ **Troubleshooting & Debugging:** Solve solver issues, convergence failures, or incorrect results
- ✓ **FEA Model Validation:** Ensure correct meshing, boundary conditions, and simulation accuracy
- ✓ **Skills Gap Assessment:** Initial competency evaluation for each engineer, with a tailored development roadmap
- ✓ **Continuous Support & Training:** Mesh optimization, elements, boundary conditions, solver settings
- ✓ **Online On-Demand Training:** Access to the FEA Academy Online Training Center
- ✓ **Quarterly Progress Reports:** Management reporting on engineer development, competency improvements, and recommended next steps

> *With every package, you have full access to Dominique Madier for expert guidance and detailed review of your FEA analyses.*

Based on client outcomes, companies that invest in structured FEA Coaching typically see a **reduction in errors by 30%** and a **20% improvement in project efficiency** within 3 months.

Frequently Asked Questions

Q1 – How does team-level coordination work?

Support hours can be allocated flexibly across your engineering team. Dominique works with your team lead or engineering manager to identify individual skills gaps, prioritize training focus areas, and coordinate sessions — whether one-on-one or in small groups — to ensure each engineer progresses effectively.

Q2 – Is there any reporting on team progress?

Yes. Quarterly progress reports are provided to management, summarizing team's development, skills gaps addressed, competency improvements, and recommended next steps. This gives leadership visibility into the return on their training investment.

Q3 – What is the contract term?

All Corporate Subscription Plans are 12-month commitments. Annual fees are invoiced at the start of the contract period. Renewals and plan upgrades can be discussed in the final quarter of the agreement.

Q4 – How are individual skills gaps identified and addressed?

At onboarding, Dominique conducts an initial competency assessment for each engineer on the plan. This identifies specific areas for improvement — from meshing and boundary conditions to nonlinear solver strategies — and informs a tailored development roadmap that guides the Coaching throughout the year.

Pricing

All Corporate Subscription Plans are 12-month commitments. Annual fees are invoiced at the start of the contract period.

Plan Feature	Essential Suite	Professional Suite	Platinum Suite
Team Size	Up to 5 Engineers	Up to 10 Engineers	Up to 15 Engineers
Annual Fee	**US$ 30,000 /year**	**US$ 50,000 /year**	**US$ 62,500 /year**
Included Support Hours (Live Zoom)	100 hrs/year	180 hrs/year	250 hrs/year
Basic Course (20 hours)*	✓	✓	✓
Nonlinear Course (12 hours)*	✗	✓	✓
Linear Static & Buckling, Modal Analysis Support	✓	✓	✓
Nonlinear Static Analysis Support	✗	✓	✓
Dynamic Freq. Response Analysis Support	✗	✗	✓
FEA Validation & Review	✓	✓	✓

** Unlimited access to the FEA Academy learning platform.*