

START HERE - Your Complete Learning Journey

A Gift From Your Father

Dear Mauricio,

This course is a special gift created just for you by your father, **Sergio Muñoz de Alba Medrano**.

Watching you excel at **PE Club** in Brussels fills me with immense pride. Your work in Private Equity demands the best tools and skills, and this course will give you a competitive edge that few analysts have.

I've built this comprehensive program to help you master:

- **Modern development tools** (VS Code, Git, GitHub)
- **AI-powered coding** (GitHub Copilot)
- **Professional Python** for financial modeling
- **Advanced valuation techniques** for PE/IB work

You're already doing amazing work at PE Club. Now, let's take your technical skills to the next level.

With all my love and pride,

Papá

Welcome to Advanced Financial Modeling with VS Code!

This course teaches you **three valuable skills at once**:

1. **VS Code mastery** - Modern development environment
2. **Python for finance** - Programming for financial analysis
3. **AI-powered workflow** - GitHub Copilot & version control

Built specifically for: PE professionals who want to automate models and work 10x faster

What You'll Learn

VS Code Skills

- Navigate the interface like a pro
- Use keyboard shortcuts for speed
- Debug and run code efficiently
- Work with multiple files and terminals
- Customize your workspace

GitHub & Copilot

- Version control your models (never lose work!)
- AI code assistant for faster development

- Collaborate and share models
- Build a professional portfolio

IMPORTANT: Copilot & GitHub Subscriptions

To get the FULL power of this course, you'll need:

1. GitHub Copilot Subscription (\$10/month)

- **Essential** for AI-assisted coding throughout this course
- Without it, you'll miss 70% of the productivity gains
- **Worth every penny** - writes code 10x faster
- Sign up: <https://github.com/features/copilot>
- **Your father's recommendation:** This is a career investment, not an expense

2. GitHub Pro (Optional, \$4/month)

- Unlimited private repositories
- Advanced collaboration features
- Professional portfolio with insights
- **Good for PE work** - keep proprietary models private

Total Investment: ~\$10-14/month for tools that will save you 10+ hours/week

 **Think of it this way:** If Copilot saves you even 2 hours per week, and your time is worth €50/hour (conservative for PE), that's €400/month in value for a €10 investment. **40x ROI!**

Free Alternatives:

- GitHub (free tier) - Works fine, but limited private repos
- No Copilot alternative - You really need this one

Setup Order:

1. Create free GitHub account first
2. Start 30-day Copilot free trial
3. Complete Module 1-2 during trial
4. Subscribe to Copilot (you'll be convinced by then!)
5. Upgrade to GitHub Pro if working with sensitive PE models

Financial Modeling

- DCF (Discounted Cash Flow) models
- LBO (Leveraged Buyout) analysis
- M&A (Mergers & Acquisitions) modeling
- Private Equity fund analysis
- Real-world projects

Your Learning Path

Phase 1: Foundation (Week 1-2)

Week 1: Master Your Development Environment

Day 1-2: VS Code Mastery

1. Install everything: [QUICK_START_GUIDE.md](#) (30 min)
2. **Complete Tutorial 01:** [Tutorials/01_VS_Code_Basics.md](#) (2-3 hours) ★ ESSENTIAL!
 - Learn interface, shortcuts, terminal
 - Build your first Python calculator
 - Troubleshoot common issues
3. Module 01 reading: [Module_01_Setup/01_Getting_Started.md](#) (1 hour)
4. Practice: Navigate VS Code confidently, no mouse needed

Day 3-5: Git, GitHub & AI Coding

1. **Complete Tutorial 02:** [Tutorials/02_GitHub_Copilot_Hands_On.md](#) (3-4 hours) ★ CRITICAL!
 - Install Git (Windows guide included)
 - Create your first repository
 - Subscribe to GitHub Copilot (\$10/month - WORTH IT!)
 - Let AI write code with you
2. Module 01 reading: [Module_01_Setup/02_GitHub_and_Copilot.md](#) (1.5 hours)
3. Practice: Make daily commits, use Copilot suggestions

Day 6-7: Python Fundamentals

1. [Module_02_Python_Fundamentals/01_Python_Basics.md](#) (3 hours)
 2. **Practice with Copilot:** Let AI teach you Python!
 3. Complete all exercises in [solutions.py](#)
 4. Run [congratulations.py](#) when done 
 5. **VS Code Tip:** Use Copilot Chat to explain confusing code
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🟡 Phase 2: Data Skills & Financial Models (Week 2-5)

Week 2: Data Analysis for Finance

1. **Complete Tutorial 03:** [Tutorials/03_VS_Code_Data_Analysis.md](#) (2-3 hours) ★ NEW!
 - Pandas & Jupyter in VS Code
 - Import real financial data
 - Clean and analyze company statements
2. [Module_03_Data_Analysis/01_Pandas_for_Finance.md](#) (4 hours)
3. Work through data analysis exercises
4. Commit all work to GitHub (building your portfolio!)
5. **Milestone:** You're now 40% through the course!

Week 3: Build Your First DCF Model

1. **Complete Tutorial 04:** [Tutorials/04_Building_DCF_with_VS_Code.md](#) (3-4 hours) ★ MAJOR PROJECT!
 - Build complete DCF from scratch

- Use Git branches to experiment
 - Let Copilot help with WACC, terminal value
2. [Module_04_DCF_Modeling/01_DCF_Overview.md](#) (reading)
 3. Build professional DCF using [dcf_model.py](#)
 4. Run [dcf_celebration.py](#) when complete! 🎉
 5. **VS Code Pro Tips:** Multi-cursor editing, code snippets
 6. **Milestone:** You're now 60% through the course!

Week 4: LBO Model (PE Club Arsenal!)

1. [Module_05_LBO_Modeling/01_LBO_Overview.md](#)
2. Build complete LBO model with [lbo_model.py](#)
3. Use Copilot Chat for complex leveraged finance logic
4. Debug with VS Code debugger (breakpoints, step-through)
5. Create your first GitHub branch for experiments
6. **PE Club Impact:** Impress partners with automated deal analysis!

Week 5: Advanced Models Portfolio

1. [Module_06_MA_Analysis/](#) - M&A valuation models
 2. [Module_07_PE_Modeling/](#) - PE fund analysis
 3. Master VS Code refactoring tools
 4. Build reusable model templates
 5. **Portfolio Tip:** Make these repos public on GitHub
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● Phase 3: Professional Projects & Mastery (Week 6-8)

Week 6: Power User Skills

1. **Complete Tutorial 05:** [Tutorials/05_VS_Code_Power_User.md](#) (2-3 hours) ★ FINAL TUTORIAL!
 - Advanced productivity techniques
 - Custom code snippets for finance
 - Multi-cursor magic & automation
 - Extensions ecosystem mastery
2. [Module_08_Advanced_Topics/](#) - Monte Carlo, ML, APIs, dashboards
3. Practice advanced refactoring
4. **Milestone:** You're now 80% through the course!

Week 7: Real-World Projects

1. [Module_09_Projects/01_Final_Projects.md](#) - Overview of 4 capstone projects
2. [Module_09_Projects/01_LBO_Case_Study.md](#) - Complete end-to-end analysis
3. Build complete deal model (LBO or M&A)
4. Use VS Code workspace features for multi-file projects
5. Create professional GitHub portfolio
6. **PE Club Ready:** Present automated models to partners!

Week 8: Polish & Portfolio Launch

1. Complete remaining Module 09 projects
 2. Polish your best 3 models (DCF, LBO, M&A)
 3. Make GitHub repos public (showcase your skills!)
 4. Add professional README files to each project
 5. Update LinkedIn with new Python/VS Code skills
 6. **CONGRATULATIONS!** You're now 100% complete! 🎉
 7. **Celebrate:** Run all the celebration.py files again!
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Special Tutorials (Learn VS Code While Building)

Foundation Tutorials - Master Your Tools First!

These **5 comprehensive tutorials** teach you VS Code, Git, and Python workflows. Complete these BEFORE diving into the finance modules for maximum success.

Tutorial 01: VS Code Basics 2-3 hours | ★★☆☆☆

[Tutorials/01_VS_Code_Basics.md](#)

- **Complete beginner's guide** to VS Code
- Interface tour with screenshots
- 20+ essential keyboard shortcuts
- Step-by-step Python file creation
- Built-in troubleshooting guide (6 common problems)
- **You'll build:** Your first Python calculator
- **Perfect for:** Absolute beginners who've never coded

Tutorial 02: Git, GitHub & Copilot Hands-On 3-4 hours | ★★☆☆☆

[Tutorials/02_GitHub_Copilot_Hands_On.md](#)

- **Complete Git installation** (Windows-focused)
- Create your first GitHub repository
- Master the commit workflow
- **AI-powered coding** with GitHub Copilot
- Copilot setup & troubleshooting
- Git command reference card
- **You'll build:** Time-value calculator WITH AI assistance
- **Perfect for:** Learning version control + AI coding

Tutorial 03: VS Code Data Analysis 2-3 hours | ★★☆☆☆

[Tutorials/03_VS_Code_Data_Analysis.md](#)

- **Pandas & Jupyter** in VS Code
- Import and clean financial data
- Debug data quality issues
- Create professional visualizations

- **You'll analyze:** Real company financial statements
- **Perfect for:** Transitioning to finance work (40% → 60% course progress)

Tutorial 04: Building DCF with VS Code 3-4 hours | ★★★★☆

[Tutorials/04_Building_DCF_with_VS_Code.md](#)

- **Complete DCF model** from scratch
- Multi-file project structure
- Git branching for model experiments
- Copilot for complex financial formulas
- **You'll build:** Full discounted cash flow valuation
- **Perfect for:** Applying all your new skills (60% → 80% progress)

Tutorial 05: VS Code Power User 2-3 hours | ★★★★☆

[Tutorials/05_VS_Code_Power_User.md](#)

- **Advanced productivity** techniques
- Custom code snippets for finance
- Multi-cursor magic
- Task automation
- Extensions ecosystem mastery
- **You'll master:** 10x faster workflow
- **Perfect for:** Final course push (80% → 100% - CONGRATULATIONS!)

🎓 Learning Approach: See It, Try It, Build It

Every Module Follows This Pattern:

1. Watch & Learn (VS Code)

- See how professionals use VS Code
- Learn keyboard shortcuts in context
- Understand the workflow

2. Code Along (Copilot)

- Let Copilot suggest code
- Learn to prompt AI effectively
- Understand what's being generated

3. Practice (Python + Finance)

- Build real financial models
- Solve actual problems
- Create portfolio pieces

4. Version Control (GitHub)

- Commit your progress
 - Track changes
 - Build your portfolio
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💡 Daily Study Routine (90 minutes/day)

Morning Session (45 min)

1. **Review** (10 min): Yesterday's concepts
2. **Learn** (25 min): New module content
3. **VS Code Practice** (10 min): New shortcuts/features

Evening Session (45 min)

1. **Code** (30 min): Build examples
2. **Exercise** (10 min): Practice problems
3. **Commit** (5 min): Save to GitHub

Weekend (3-4 hours)

1. **Project Work**: Build complete models
 2. **Experimentation**: Try new approaches
 3. **Portfolio**: Polish and share work
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🔑 Key Concepts You'll Master

VS Code Mastery

- 📈 **Keyboard shortcuts** - 10x faster workflow
- 📁 **File management** - Multi-file projects
- 🐞 **Debugging** - Find and fix errors
- 🖌️ **Code editing** - Multi-cursor, refactoring
- 📊 **Extensions** - Customize your environment
- 🛡️ **Terminal** - Command line integration

GitHub Workflow

- 📁 **Repositories** - Organize projects
- 🔄 **Commits** - Track changes
- 🌱 **Branches** - Experiment safely
- 🤝 **Collaboration** - Share and review
- 🚧 **Portfolio** - Showcase your work

Copilot Skills

- 💬 **Prompting** - Get AI to write what you need
- 🐸 **Code generation** - Build faster
- 📖 **Learning** - Understand suggestions

- 🔎 **Debugging** - AI-assisted troubleshooting
- ✅ **Verification** - Check AI output

Financial Modeling

- 💰 **DCF** - Company valuation
 - 💰 **LBO** - Private equity deals
 - 💰 **M&A** - Transaction analysis
 - 💰 **Data analysis** - Financial statements
 - 💰 **Automation** - Repeatable workflows
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🎯 Success Milestones

✓ Week 1 - VS Code Comfortable

- Can navigate VS Code without mouse
- Set up Git repository
- Copilot generating useful code
- Completed basic Python exercises

✓ Week 2 - Data Analysis

- Import financial data from Excel
- Calculate key financial ratios
- Create visualizations
- Commit work to GitHub regularly

✓ Week 4 - First Complete Model

- Built working DCF model
- Used Copilot for 50%+ of code
- Debugged issues using VS Code
- Model in GitHub with good commits

✓ Week 6 - Professional Level

- Completed LBO case study
- Created reusable templates
- Master VS Code shortcuts
- Portfolio on GitHub

✓ Week 8 - Course Complete

- 3+ complete financial models
 - Public GitHub portfolio
 - Can build models from scratch
 - VS Code power user
 - Ready for finance career!
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Quick Reference Guides

Essential VS Code Shortcuts (Windows)

File Operations:

Ctrl+N	New file
Ctrl+O	Open file
Ctrl+S	Save
Ctrl+Shift+S	Save as
Ctrl+W	Close file
Ctrl+P	Quick open (most important!)

Editing:

Ctrl+ /	Comment/uncomment
Alt+↑/↓	Move line up/down
Shift+Alt+↑/↓	Copy line up/down
Ctrl+D	Select next occurrence
Ctrl+L	Select line

Navigation:

Ctrl+G	Go to line
Ctrl+Shift+0	Go to symbol
F12	Go to definition
Alt+←/→	Navigate back/forward

Terminal:

Ctrl+`	Toggle terminal
Ctrl+Shift+`	New terminal

Copilot:

Tab	Accept suggestion
Ctrl+Enter	Show all suggestions
Ctrl+Shift+I	Open Copilot Chat

Git Workflow Cheat Sheet

```
# Daily workflow
git status          # Check what changed
git add .           # Stage all changes
git commit -m "message" # Commit with message
git push            # Upload to GitHub

# Branching
git branch feature-name # Create branch
git checkout feature-name # Switch to branch
git merge feature-name # Merge back to main

# Undo
git checkout -- file # Discard changes
git reset HEAD~1     # Undo last commit
```

Getting Help

When You're Stuck

1. VS Code Issues

- Press **F1** or **Ctrl+Shift+P** and search for command
- Check [Tutorials/01_VS_Code_Basics.md](#)
- View → Command Palette

2. Python Errors

- Read error message carefully
- Ask Copilot Chat: "Explain this error" (requires subscription)
- Check module solutions files
- Google: "Python [error message]"

3. Financial Concepts

- Review module theory sections
- Ask Copilot: "Explain [concept]" (best with paid subscription)
- Check Investopedia
- Real-world examples in projects
- **PE Club colleagues** - You have an amazing team to learn from!

4. Git Problems

- **git status** shows current state
- Check [Module_01_Setup/02_GitHub_and_Copilot.md](#)
- GitHub docs: <https://docs.github.com>

5. Ask Your Father

- Sergio built this course and knows it inside-out
- He's proud of your progress and wants to help!
- Share your GitHub portfolio with him

Bonus Resources

Included in Course

- Complete Python financial modeling library
- DCF, LBO, M&A model templates
- Sample datasets (real companies)
- VS Code configuration files
- Git workflows and best practices
- Copilot prompt library

Your Tools

- **VS Code** - Your development environment
 - **Python** - Programming language
 - **GitHub** - Version control & portfolio
 - **Copilot** - AI coding assistant
 - **Pandas** - Data analysis
 - **NumPy** - Financial calculations
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Ready to Start?

Your First Hour:

1. **Install Everything (30 min)** → Read [QUICK_START_GUIDE.md](#) → Follow each step carefully → Test that everything works
 2. **Learn VS Code (30 min)** → Open [Tutorials/01_VS_Code_Basics.md](#) → Follow the interactive tutorial → Practice keyboard shortcuts
 3. **First Code (30 min)** → Create your first Python file → Let Copilot help you → Commit to GitHub
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Track Your Progress

Create a file [my_progress.md](#) in your folder:

```
# My Learning Progress

## Week 1
- [x] Day 1: Setup complete
- [x] Day 2: VS Code basics
- [ ] Day 3: GitHub setup
- [ ] Day 4: First model

## Goals
- Complete DCF by: _____
- Build LBO by: _____
- Portfolio ready: _____

## Notes
- Best shortcut learned: Ctrl+P
- Favorite Copilot feature: Chat
- Hardest concept: WACC calculation
```

Commit this file to track your journey!

Your Next Steps

Right Now:

1. Open [QUICK_START_GUIDE.md](#)
2. Install VS Code, Python, Git
3. Set up GitHub account
4. Install Copilot

Tomorrow:

1. Complete [Tutorials/01_VS_Code_Basics.md](#)
2. Practice keyboard shortcuts
3. Create first repository

This Week:

1. Finish Module 1 & 2
 2. Build first financial calculator
 3. Get comfortable with Copilot
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💪 Motivation

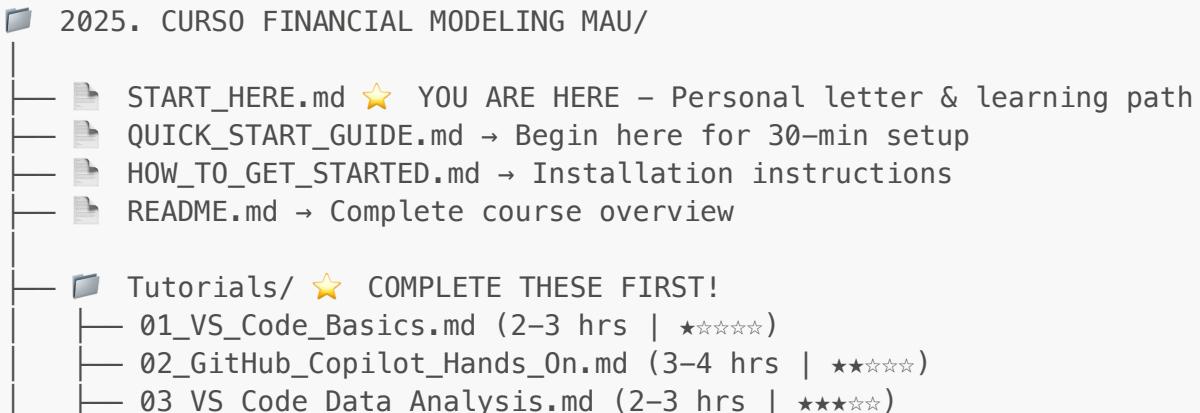
Why This Matters for Your PE Career:

- **PE Club Edge:** Automate deal analysis, impress partners
- **Efficiency:** Build LBO models in 30 minutes vs 3 hours
- **Portfolio:** Show sophisticated Python skills (rare in PE)
- **Career Growth:** Senior PE professionals who code earn 30%+ more
- **Future-proof:** AI + Finance = The future of investment analysis
- **Brussels Network:** Stand out in European PE community

Your father believes in you. PE Club chose you for a reason. Now add technical superpowers to your already impressive skill set!

From Brussels to the world - you've got this, Mauricio! 🇧🇪 → 🌎

📞 Course Structure Summary



```
    └── 04_Building_DCF_with_VS_Code.md (3-4 hrs | ★★★★☆)
        └── 05_VS_Code_Power_User.md (2-3 hrs | ★★★★☆)

    └── Module_01_Setup/ (Week 1)
        ├── 01_Getting_Started.md
        ├── 02_GitHub_and_Copilot.md
        ├── requirements.txt
        └── test_environment.py

    └── Module_02_Python_Fundamentals/ (Week 1)
        ├── 01_Python_Basics.md
        ├── solutions.py
        └── congratulations.py 🎉

    └── Module_03_Data_Analysis/ (Week 2)
        ├── 01_Pandas_for_Finance.md
        └── solutions.py

    └── Module_04_DCF_Modeling/ (Week 3)
        ├── 01_DCF_Overview.md
        ├── dcf_model.py
        ├── solutions.py
        └── dcf_celebration.py 🎉

    └── Module_05_LBO_Modeling/ (Week 4)
        ├── 01_LBO_Overview.md
        ├── lbo_model.py
        └── solutions.py

    └── Module_06_MA_Analysis/ (Week 5)
        ├── 01_MA_Overview.md
        └── solutions.py

    └── Module_07_PE_Modeling/ (Week 5)
        ├── 01_PE_Overview.md
        └── solutions.py

    └── Module_08_Advanced_Topics/ (Week 6)
        ├── 01_Advanced_Overview.md
        └── solutions.py

    └── Module_09_Projects/ (Week 7-8)
        ├── 01_Final_Projects.md
        ├── 01_LBO_Case_Study.md
        └── solutions.py
```

📊 Course Progression:

- Week 1-2: 🟢 Tutorials + Setup + Python → 40% Complete
- Week 3-5: 🟡 Financial Models (DCF, LBO, M&A, PE) → 80% Complete
- Week 6-8: 🟥 Advanced + Real Projects → 100% DONE! 🎉

🎓 Final Words from Your Father

Mauricio,

You're learning three careers in one:

1. Software Developer (VS Code, Git, Python)
2. Financial Analyst (Modeling, Valuation)  Already mastering this at PE Club!
3. AI Engineer (Copilot, Automation)

You already have the financial acumen - you prove that every day in Brussels. Now you're adding the technical weapons that will make you unstoppable.

Take it step by step. Every expert was once a beginner.

I'm so proud of the professional you've become. This course is my way of helping you become even better.

Remember: **Subscribe to Copilot** - it's the secret sauce that makes everything click.

With all my love and pride,

Sergio Muñoz de Alba Medrano

P.S. - Keep an eye out for a special surprise when you complete your first project... 

Ready? Let's transform your career to the next level! 

► BEGIN HERE

 **Next Step:** Open [QUICK_START_GUIDE.md](#) and install everything

 **Then:** Read [Tutorials/01_VS_Code_Basics.md](#) for your first lesson

Questions? Every module has solutions and examples!

Good luck! You've got this! 

Last updated: November 29, 2025 Course version: 1.0 For: Complete beginners to VS Code