Green Finance Professional Certificate

Intensive 8-Week Program

Course Overview

Program Description

This intensive professional certificate provides finance professionals with comprehensive knowledge and practical skills in green finance, sustainable investment, climate risk assessment, and impact measurement. The program covers the full spectrum from green bonds and ESG integration to renewable energy finance, regulatory frameworks, and emerging areas like natural capital finance. Designed to meet the surging market demand for green finance expertise, this program prepares participants for immediate career advancement in this rapidly growing field.

Program Details

- **Duration:** 8 weeks intensive (108 contact hours)
- **Format:** In-person instruction with hands-on workshops
- **Schedule:** 13-14 hours per week
- **Target Audience:** Finance professionals transitioning to sustainable finance
- **Prerequisites:** None (beginner-friendly with comprehensive foundation building)
- **Credential:** University-issued Professional Certificate in Green Finance
- **Class Size:** Maximum 25 participants for optimal interaction

Market Context and Demand

The green finance sector is experiencing explosive growth with a significant skills gap:

- Green hiring growing at 8% per year, while green skills supply grows at only 4.3%
- Financial services sector: 16.3% spike in green hires (2023)
- 17,000+ green job vacancies with only 900 graduates possessing required sustainability skills
- Average salary premium: 15-25% for green finance specialists
- This certificate directly addresses the identified skills gap for mid-career professionals

Learning Objectives

Upon completion, participants will be able to:

1. Understand and apply core concepts, instruments, and markets in green finance
2. Analyze and utilize ESG data for investment screening and portfolio construction
3. Assess climate-related financial risks using TCFD and scenario analysis frameworks
4. Develop financial models for renewable energy projects and green investments
5. Navigate global regulatory frameworks including EU Taxonomy, SFDR, and emerging standards
6. Evaluate and structure green bonds and sustainable debt instruments
7. Apply impact investing principles and measure social and environmental returns
8. Understand biodiversity finance and natural capital frameworks (TNFD)
9. Use practical tools (Python, Excel, ESG platforms) for green finance analysis
10. Integrate green finance concepts across organizational functions

Assessment Components

- Weekly Assignments and Case Studies (4 assignments): 30%
- Midterm Financial Modeling Project: 20%
- Research Paper: 20%
- Final Integration Project and Presentation: 30%

Required Tools and Software

- Microsoft Excel (financial modeling)
- Python 3.x with pandas, numpy, matplotlib libraries (provided setup guide)
- Access to ESG data platforms (institutional access provided during course)
- PDF reader and presentation software

Weekly Schedule

Week 1: Green Finance Foundations (14 hours)

Learning Objectives:

- Define green finance and understand its evolution and market structure
- Identify key stakeholders, instruments, and drivers in the green finance ecosystem
- Understand the climate imperative and financial risks/opportunities
- Apply fundamental financial concepts (time value of money, bond pricing, portfolio theory) to green finance

Session Breakdown:
Session 1.1 - Introduction to Green Finance (3 hours)

- Definition, scope, and evolution of green finance
- Climate change and the financial system linkage
- Market size, growth trajectory, and investment gap ($2-3 trillion annually)
- Paris Agreement Article 2.1c implications for finance

Session 1.2 - Green Finance Ecosystem (3 hours)

- Market participants: capital providers, recipients, intermediaries
- Role of development finance institutions and blended finance
- International organizations and standard-setters (ICMA, FSB, NGFS, ISSB)
- Public-private partnerships in green finance

Session 1.3 - Green Financial Instruments Overview (4 hours)

- Green bonds, sustainability-linked instruments, and green loans
- Carbon markets: compliance (EU ETS) and voluntary markets
- Green equity, funds, and ETFs
- Emerging instruments: blue bonds, transition bonds
- Performance evidence: returns, risks, and greenium

Session 1.4 - Financial Fundamentals Workshop (4 hours)

- Time value of money and NPV in green projects
- Bond pricing, yields, and duration
- Portfolio theory and diversification
- Risk-return analysis for green investments
- Excel modeling foundations

Readings:

- Berrou et al. (2019). "A taxonomy of green finance"
- Giglio, Kelly, Stroebel (2021). "Climate Finance" (Annual Review)
- Climate Bonds Initiative (2024). "State of the Market Report"
- UNEP (2024). "Global Landscape of Climate Finance"

Assignment: None (foundation week)

Week 2: Green Bonds and Sustainable Debt Markets (14 hours)

Learning Objectives:

- Understand green bond market structure, principles, and issuance process
- Analyze green bond frameworks and assess alignment with standards
- Evaluate pricing dynamics and the greenium phenomenon
- Differentiate between green bonds, sustainability-linked instruments, and transition bonds
- Structure and price green debt instruments

Session Breakdown:
Session 2.1 - Green Bond Markets and Principles (3.5 hours)

- Market history: EIB 2007 to $1.6 trillion market today
- Green Bond Principles (ICMA): four core components
- Use of proceeds categories and eligible projects
- Market segmentation: sovereign, corporate, municipal, supranational
- Geographic trends: Europe, Asia, Americas

Session 2.2 - Green Bond Issuance and Verification (3.5 hours)

- Framework development: structure and requirements
- External reviews: second-party opinions, verification, certification
- Role of verifiers (Sustainalytics, CICERO, Vigeo Eiris)
- Reporting requirements and impact measurement
- Case study: Analyzing a major corporate green bond issuance

Session 2.3 - Pricing, Performance, and the Greenium (3.5 hours)

- Green bond pricing dynamics
- Greenium: evidence, magnitude (-2 to -5 bps), and drivers
- Performance comparison: green vs. conventional bonds
- Liquidity considerations and market efficiency
- Investor demand and oversubscription patterns

Session 2.4 - Beyond Green Bonds: SLBs, Transition, and Innovation (3.5 hours)

- Sustainability-Linked Bonds: KPIs, SPTs, and step-up mechanisms
- Transition bonds and Climate Transition Finance Handbook (ICMA)
- Social bonds and sustainability bonds
- Greenwashing risks and controversies
- Workshop: Green bond framework analysis and pricing exercise

Readings:

- ICMA (2024). "Green Bond Principles"

- Flammer (2021). "Corporate green bonds" (JFE)
- Zerbib (2019). "The effect of pro-environmental preferences on bond prices"
- Tang & Zhang (2020). "Do shareholders benefit from green bonds?"
- ICMA (2023). "Climate Transition Finance Handbook"

Assignment 1 Due (End of Week 2): Green Bond Framework Evaluation and Pricing Analysis

Week 3: ESG Integration and Data Analytics (13 hours)

Learning Objectives:

- Understand ESG rating methodologies and data providers
- Apply ESG screening, integration, and thematic investing approaches
- Use Python and ESG platforms for data analysis and portfolio construction
- Evaluate materiality and ESG performance metrics
- Critically assess ESG rating divergence and quality issues

Session Breakdown:
Session 3.1 - ESG Frameworks, Ratings, and Controversies (3 hours)

- ESG concepts: environmental, social, governance dimensions
- Major rating providers: MSCI, Sustainalytics, Refinitiv, ISS ESG
- Rating methodologies and scoring approaches
- The divergence problem: why ratings disagree
- Data quality, coverage, and comparability challenges

Session 3.2 - ESG Integration Strategies (3 hours)

- Negative screening and exclusions
- Best-in-class and positive screening
- ESG integration into fundamental analysis
- Thematic and impact investing approaches
- Materiality assessment: financial vs. impact materiality
- Engagement and active ownership

Session 3.3 - ESG Data Platforms Workshop (3 hours)

- Hands-on: MSCI/Refinitiv platform navigation
- Data extraction, filtering, and export
- Company ESG profiles and controversy analysis
- Sector benchmarking and peer comparison
- Creating custom ESG screens

Session 3.4 - Python for ESG Portfolio Analytics (4 hours)

- Python environment setup and pandas basics
- Loading and cleaning ESG datasets
- Portfolio screening based on ESG criteria
- ESG score calculations and weighted averages
- Visualization: ESG distribution, sector analysis
- Backtesting ESG-screened portfolios
- Performance attribution: ESG vs. financial factors

Readings:

- Berg et al. (2022). "Aggregate confusion: The divergence of ESG ratings"
- Khan et al. (2016). "Corporate sustainability: First evidence on materiality"
- Eccles & Stroehle (2018). "Exploring social origins in ESG"
- Dimson et al. (2015). "Active ownership"

Assignment 2 Due (End of Week 3): Python ESG Portfolio Construction and Analysis

Week 4: Climate Risk Assessment and TCFD (13 hours)

Learning Objectives:

- Understand physical and transition climate risks and their financial implications
- Apply TCFD framework for climate-related disclosure and risk assessment
- Conduct scenario analysis using NGFS and other climate scenarios
- Quantify climate risks: Climate VaR, carbon footprinting, stranded assets
- Integrate climate risk into investment and lending decisions

Session Breakdown:
Session 4.1 - Climate Risk Fundamentals (3.5 hours)

- Physical risks: acute (extreme weather) and chronic (sea level rise, temperature)
- Transition risks: policy, technology, market, reputation
- Climate risk transmission to financial system
- Systemic risk and "green swan" events
- Sector-specific vulnerabilities

Session 4.2 - TCFD Framework and Disclosure (3.5 hours)

- TCFD structure: governance, strategy, risk management, metrics & targets
- Climate scenario analysis: methodology and best practices
- NGFS scenarios: orderly, disorderly, hot house world
- Case study: Analyzing corporate TCFD reports
- Regulatory momentum: mandatory TCFD adoption globally

Session 4.3 - Climate Risk Quantification Methods (3 hours)

- Climate Value-at-Risk (CVaR) methodologies
- Carbon footprinting: Scope 1, 2, 3 emissions
- Stranded asset risk assessment
- Physical risk modeling tools and data providers
- Transition pathway analysis
- Implied Temperature Rise (ITR) metrics

Session 4.4 - Scenario Analysis Workshop (3 hours)

- Hands-on: Portfolio climate risk assessment
- Excel-based scenario modeling
- Calculating portfolio carbon footprint
- Climate stress testing framework
- Group exercise: Sector-specific transition risk analysis

Readings:

- TCFD (2017). "Final Report: Recommendations"
- Bolton et al. (2020). "The green swan" (BIS)
- Battiston et al. (2017). "A climate stress-test of the financial system"
- Krueger et al. (2020). "The importance of climate risks for institutional investors"
- NGFS (2024). "Climate Scenarios for Central Banks and Supervisors"

Midterm Project Checkpoint: Climate risk analysis component due

Week 5: Renewable Energy Project Finance (13 hours)

Learning Objectives:

- Understand renewable energy technologies, economics, and market trends
- Apply project finance principles to renewable energy investments
- Develop comprehensive financial models for solar and wind projects
- Evaluate risks and structure financing for clean energy projects
- Analyze power purchase agreements and revenue mechanisms

Session Breakdown:
Session 5.1 - Renewable Energy Technologies and Economics (3 hours)

- Solar PV: technology evolution and cost decline (90% reduction since 2010)
- Wind energy: onshore and offshore developments
- Energy storage: batteries and grid integration
- Emerging technologies: green hydrogen, geothermal, tidal

- Levelized Cost of Energy (LCOE) analysis
- Learning curves and technology forecasting

Session 5.2 - Project Finance Structure and Principles (3.5 hours)

- Project finance vs. corporate finance
- Special purpose vehicles (SPVs) and ring-fencing
- Debt-equity structuring and optimal capital structure
- Risk allocation: construction, technology, market, counterparty
- Offtake agreements: PPAs, feed-in tariffs, merchant exposure
- Sponsor requirements and investment criteria

Session 5.3 - Renewable Energy Financial Modeling (4 hours)

- Revenue modeling: generation profiles, capacity factors, degradation
- Cost structure: CAPEX (equipment, installation), OPEX (maintenance, insurance)
- Debt modeling: sizing, sculpting, covenants
- Returns metrics: project IRR, equity IRR, DSCR, NPV
- Sensitivity analysis: key value drivers
- Taxation and incentives (ITC, PTC, accelerated depreciation)

Session 5.4 - Project Finance Workshop (2.5 hours)

- Hands-on: Building integrated solar project model in Excel
- Case study: Real-world wind farm financing
- Risk analysis and mitigation strategies
- PPA negotiation dynamics

Readings:

- IRENA (2024). "Renewable Power Generation Costs"
- Steffen (2020). "Estimating the cost of capital for renewable energy projects"
- Ameli et al. (2021). "Higher cost of finance exacerbates energy divide"
- IEA (2024). "World Energy Investment Report"

Midterm Project Due (End of Week 5): Renewable Energy Project Financial Model

Week 6: Global Regulatory Frameworks (14 hours)

Learning Objectives:

- Navigate EU sustainable finance regulation: Taxonomy, SFDR, CSRD
- Understand global regulatory landscape and convergence trends
- Apply taxonomies to investment and product classification
- Assess regulatory compliance requirements and implementation challenges
- Anticipate future regulatory developments

Session Breakdown:
Session 6.1 - EU Taxonomy Deep Dive (4 hours)

- EU Action Plan on Sustainable Finance: origins and objectives
- Taxonomy Regulation: structure and six environmental objectives
- Technical screening criteria: "do no significant harm" and minimum safeguards
- Substantial contribution thresholds by sector
- Climate Delegated Acts: mitigation and adaptation
- Taxonomy alignment reporting for companies and financial products
- Controversies and limitations

Session 6.2 - SFDR and Disclosure Requirements (3 hours)

- SFDR Level II: entity and product-level disclosures
- Article 6, 8, and 9 fund classifications
- Principal Adverse Impacts (PAIs)
- Regulatory Technical Standards (RTS)
- Greenwashing prevention and enforcement
- Integration with MiFID II, UCITS, AIFMD

Session 6.3 - CSRD and Global Reporting Standards (3 hours)

- Corporate Sustainability Reporting Directive (CSRD)
- European Sustainability Reporting Standards (ESRS)
- Double materiality: impact and financial materiality
- ISSB standards: IFRS S1 and S2
- GRI, SASB, and standard convergence
- Assurance and audit requirements

Session 6.4 - Global Regulatory Landscape (4 hours)

- United States: SEC climate disclosure rule (status and challenges)
- United Kingdom: sustainability disclosure requirements
- Asia-Pacific: China Green Bond Catalogue, Singapore Green Finance taxonomy, ASEAN standards

- Emerging markets: Brazil, India, South Africa
- Regulatory convergence and fragmentation
- IOSCO and global coordination efforts
- Workshop: Taxonomy alignment exercise

Readings:

- European Commission (2024). "EU Taxonomy Compass"
- Ehlers & Packer (2017). "Green bond finance and certification"
- Volz (2018). "Fostering green finance for sustainable development"
- ISSB (2023). "IFRS S1 and S2 Standards"
- SEC (2024). "Climate-Related Disclosures" (proposed rule)

Assignment 3 Due (End of Week 6): Taxonomy Alignment Assessment and Regulatory Compliance Analysis

Week 7: Impact Investing, Blended Finance, and Natural Capital (13 hours)

Learning Objectives:

- Differentiate impact investing from ESG integration and philanthropy
- Apply impact measurement frameworks: IRIS+, SDG alignment, Theory of Change
- Structure blended finance transactions for emerging markets
- Understand natural capital, biodiversity finance, and TNFD framework
- Evaluate social bonds and development finance instruments

Session Breakdown:
Session 7.1 - Impact Investing Foundations (3.5 hours)

- Definition and spectrum: financial-first to impact-first
- Impact investing vs. ESG vs. philanthropy
- Market size: $1+ trillion AUM globally
- Investor motivations and return expectations
- Impact themes: financial inclusion, affordable housing, clean energy access, sustainable agriculture
- Case studies: microfinance, off-grid solar, impact bonds

Session 7.2 - Impact Measurement and Management (3 hours)

- Theory of Change and impact pathways
- IRIS+ metrics: Global Impact Investing Network (GIIN) standards
- Impact Management Project (IMP): five dimensions
- SDG alignment and contribution claims
- Additionality and attribution challenges
- SROI (Social Return on Investment) calculations

- Reporting frameworks and transparency

Session 7.3 - Blended Finance and Development Capital (3.5 hours)

- Blended finance: concept and rationale
- Catalytic capital structures: first-loss, guarantees, concessional debt
- DFI roles: IFC, EIB, AfDB, ADB mobilization strategies
- Use cases: renewable energy in frontier markets, SME finance, sustainable infrastructure
- Performance evidence and leverage ratios
- Social bonds: market growth and use of proceeds
- Development impact bonds and pay-for-success models

Session 7.4 - Natural Capital and Biodiversity Finance (3 hours)

- Natural capital: definition and valuation approaches
- Biodiversity loss as financial risk
- TNFD (Taskforce on Nature-related Financial Disclosures) framework
- Nature-based solutions and financing mechanisms
- Biodiversity credits and markets
- Blue bonds and ocean finance
- Payment for ecosystem services (PES)
- Case study: Conservation finance transactions

Readings:

- Bugg-Levine & Emerson (2011). "Impact Investing: Transforming How We Make Money"
- GIIN (2024). "Annual Impact Investor Survey"
- Convergence (2024). "State of Blended Finance Report"
- TNFD (2023). "Recommendations of the Taskforce on Nature-related Financial Disclosures"
- Dasgupta (2021). "The Economics of Biodiversity" (Dasgupta Review excerpts)

Assignment: None (focus on final project)

Week 8: Advanced Applications, Integration, and Future Trends (14 hours)

Learning Objectives:

- Apply integrated green finance frameworks to complex real-world scenarios
- Analyze sovereign green bond strategies and national green finance policies
- Understand corporate transition strategies and sector pathways
- Explore green fintech innovation and digital solutions
- Synthesize course learnings into comprehensive investment strategies
- Present professional-quality green finance recommendations

Session Breakdown:

Session 8.1 - Portfolio Construction with Climate Constraints (3 hours)

- Net-zero portfolio alignment strategies
- Paris-aligned benchmarks and indices
- Climate budget constraints
- Transition pathway optimization
- Portfolio decarbonization approaches
- Balancing returns, risk, and climate objectives
- Workshop: Climate-constrained portfolio optimization

Session 8.2 - Sovereign Green Finance and National Strategies (3 hours)

- Sovereign green bonds: major issuers and frameworks
- National green finance roadmaps: China, Singapore, UK
- Central bank green finance initiatives and NGFS
- Green QE and monetary policy tools
- Fiscal policy: green budgets and carbon pricing
- Case study: EU Green Bond framework (NextGenerationEU)

Session 8.3 - Corporate Transition Strategies and Sector Pathways (3 hours)

- Corporate net-zero commitments and credibility assessment
- Science-Based Targets initiative (SBTi)
- Sector transition pathways: energy, transport, buildings, heavy industry
- Transition finance vs. green finance
- Just transition considerations
- Engagement strategies for high-emitting sectors
- Workshop: Corporate transition plan analysis

Session 8.4 - Green Fintech and Innovation (2 hours)

- Digital MRV (monitoring, reporting, verification)
- Blockchain for carbon credits and supply chain transparency
- AI and machine learning for climate risk assessment
- Satellite data and alternative data sources
- Green neobanks and sustainability-linked banking
- Crowdfunding and retail green finance platforms

Session 8.5 - Integration Case Study and Course Synthesis (3 hours)

- Comprehensive case study integrating all course elements
- Group problem-solving: real-world green finance challenge

- Course themes synthesis
- Career pathways in green finance
- Continuing professional development resources
- Final project Q&A and preparation

Readings:

- Network for Greening the Financial System (2024). "Progress Report"
- Science Based Targets initiative (2024). "Corporate Net-Zero Standard"
- IEA (2024). "Net Zero Roadmap"
- UN Environment Programme (2024). "State of Finance for Nature"
- Various: Selected readings on fintech and innovation

Final Project Presentations (Session 8 afternoon):

- Student presentations of final integration projects
- Peer and instructor feedback
- Best practices sharing
- Certificate ceremony

Assessment Details

Weekly Assignments and Case Studies (30% total)

Assignment 1: Green Bond Framework Evaluation (7.5%)

- Due: End of Week 2
- Format: 2000-2500 words written analysis + Excel pricing model
- Task: Select real green bond issuance, evaluate framework against GBP, assess external review quality, analyze pricing and compare with comparable conventional bond

Assignment 2: ESG Portfolio Construction (7.5%)

- Due: End of Week 3
- Format: Python Jupyter notebook with analysis and commentary
- Task: Build multi-criteria ESG-screened portfolio, backtest performance, analyze ESG characteristics, create visualization dashboard, compare with benchmarks

Assignment 3: Taxonomy Alignment and Regulatory Analysis (7.5%)

- Due: End of Week 6
- Format: 1500-2000 words + Excel alignment worksheet
- Task: Assess portfolio or fund for EU Taxonomy alignment, analyze compliance challenges, compare EU and other jurisdictions, recommend disclosure approach

Assignment 4: Weekly Participation and Mini-Cases (7.5%)

- Ongoing throughout course
- In-class case discussions, workshop exercises, participation quality

Midterm Financial Modeling Project (20%)

- Due: End of Week 5
- Format: Complete Excel financial model + 3-page executive summary
- Task: Develop comprehensive project finance model for renewable energy project (solar or wind)
- Requirements:
  - Revenue modeling: generation profile, PPA, degradation
  - Cost structure: CAPEX, OPEX, working capital
  - Financing: debt sizing, sculpting, equity returns
  - Outputs: IRR, NPV, DSCR, payback period
  - Sensitivity analysis on 5+ key variables
  - Investment recommendation with risk assessment

Research Paper (20%)

- Due: Week 7 (before final presentations)
- Length: 4000-5000 words
- Format: Academic research paper with proper citations
- Requirements: Minimum 20 peer-reviewed sources, original analysis or application
- Sample topics:
  - Climate risk integration in pension fund portfolios
  - Green bond market development in emerging economies
  - ESG rating methodologies: comparative analysis and implications
  - Effectiveness of carbon pricing in driving investment decisions
  - Blended finance: performance analysis and scaling challenges
  - Natural capital integration in financial decision-making
  - Regulatory fragmentation vs. convergence in sustainable finance
  - Custom topic (requires approval by Week 3)

Final Integration Project and Presentation (30% total)

Final Project (20%)

- Due: End of Week 8 (before presentations)
- Format: Professional deliverable (varies by project type) + comprehensive documentation
- Options (choose one):
  - Green investment strategy: develop complete investment strategy for institutional investor including climate risk assessment, ESG integration, impact goals, and portfolio construction
  - Corporate sustainability finance plan: design green finance roadmap for company including green bond issuance, transition finance, target setting, and disclosure strategy
  - Green finance product design: structure new sustainable finance product including framework, verification, pricing, and marketing strategy
  - Policy analysis and recommendations: analyze national/regional green finance policy framework and provide reform recommendations
- Requirements: Integration of minimum 5 course topics, quantitative analysis, practical applicability, professional quality

Final Presentation (10%)

- Delivered: Final afternoon of Week 8
- Length: 20 minutes + 5 minutes Q&A
- Format: Professional pitch-style presentation (PowerPoint/PDF)
- Content: Project overview, methodology, key findings, recommendations, implementation considerations
- Evaluation criteria: Technical accuracy (40%), clarity and structure (30%), professional delivery (20%), Q&A handling (10%)

Comprehensive Reading List

Core Textbooks and Reviews (Recommended)

- Giglio, S., Kelly, B., and Stroebel, J. (2021). "Climate Finance." *Annual Review of Financial Economics*, 13, 15-36.
- Krosinsky, C., and Purdom, S. (Eds.). (2020). *Sustainable Investing: Revolutions in Theory and Practice*. Routledge.

Week-by-Week Academic Papers and Reports

Week 1: Foundations

- Berrou, R., Dessertine, P., and Migliorelli, M. (2019). "An overview of green finance." In *The Rise of Green Finance in Europe*.
- UNEP (2024). "Global Landscape of Climate Finance."
- Climate Bonds Initiative (2024). "State of the Market Report."

Week 2: Green Bonds

- ICMA (2024). "Green Bond Principles: Voluntary Process Guidelines."
- Flammer, C. (2021). "Corporate green bonds." *Journal of Financial Economics*, 142(2), 499-516.
- Zerbib, O. D. (2019). "The effect of pro-environmental preferences on bond prices." *Journal of Banking and Finance*, 98, 39-60.
- Tang, D. Y., and Zhang, Y. (2020). "Do shareholders benefit from green bonds?" *Journal of Corporate Finance*, 61, 101427.
- ICMA (2023). "Climate Transition Finance Handbook."

Week 3: ESG

- Berg, F., Kolbel, J. F., and Rigobon, R. (2022). "Aggregate confusion: The divergence of ESG ratings." *Review of Finance*, 26(6), 1315-1344.
- Khan, M., Serafeim, G., and Yoon, A. (2016). "Corporate sustainability: First evidence on materiality." *The Accounting Review*, 91(6), 1697-1724.
- Eccles, R. G., and Stroehle, J. C. (2018). "Exploring social origins in the adoption of ESG."
- Dimson, E., Karakas, O., and Li, X. (2015). "Active ownership." *Review of Financial Studies*, 28(12), 3225-3268.

Week 4: Climate Risk

- TCFD (2017). "Final Report: Recommendations of the Task Force on Climate-related Financial Disclosures."
- Bolton, P., et al. (2020). *The green swan: Central banking and financial stability in the age of climate change*. Bank for International Settlements.
- Battiston, S., et al. (2017). "A climate stress-test of the financial system." *Nature Climate Change*, 7, 283-288.
- Krueger, P., Sautner, Z., and Starks, L. T. (2020). "The importance of climate risks for institutional investors." *Review of Financial Studies*, 33(3), 1067-1111.

- NGFS (2024). "NGFS Climate Scenarios for Central Banks and Supervisors."

Week 5: Renewable Energy Finance

- IRENA (2024). "Renewable Power Generation Costs."
- Steffen, B. (2020). "Estimating the cost of capital for renewable energy projects." *Energy Economics*, 88, 104783.
- Ameli, N., et al. (2021). "Higher cost of finance exacerbates a climate investment trap in developing economies." *Nature Communications*, 12, 4046.
- IEA (2024). "World Energy Investment Report."

Week 6: Regulation

- European Commission (2024). "EU Taxonomy for Sustainable Activities."
- Ehlers, T., and Packer, F. (2017). "Green bond finance and certification." *BIS Quarterly Review*, September.
- Volz, U. (2018). "Fostering green finance for sustainable development in Asia." *ADBI Working Paper Series*, No. 814.
- ISSB (2023). "IFRS Sustainability Disclosure Standards S1 and S2."
- SEC (2024). "The Enhancement and Standardization of Climate-Related Disclosures" (Proposed Rule).

Week 7: Impact and Natural Capital

- Bugg-Levine, A., and Emerson, J. (2011). *Impact Investing: Transforming How We Make Money While Making a Difference*. Jossey-Bass. (Selected chapters)
- GIIN (2024). "Annual Impact Investor Survey."
- Convergence (2024). "The State of Blended Finance."
- TNFD (2023). "Recommendations of the Taskforce on Nature-related Financial Disclosures."
- Dasgupta, P. (2021). *The Economics of Biodiversity: The Dasgupta Review*. HM Treasury. (Executive Summary)

Week 8: Integration and Future

- Network for Greening the Financial System (2024). "Progress Report."
- Science Based Targets initiative (2024). "Corporate Net-Zero Standard."
- IEA (2024). "Net Zero Roadmap: A Global Pathway to Keep the 1.5C Goal in Reach."
- UN Environment Programme (2024). "State of Finance for Nature."

Additional Recommended Resources

- Journals: Journal of Sustainable Finance & Investment, Journal of Environmental Economics and Management, Climatic Change, Environmental Research Letters
- Industry reports: Climate Bonds Initiative (quarterly), Bloomberg NEF, Rocky Mountain Institute
- Databases: MSCI ESG Research, Refinitiv ESG, Sustainalytics, CDP (Carbon Disclosure Project)
- Podcasts: Investing in Climate, Green Finance (Yale), Outrage + Optimism
- Online courses for continued learning: Coursera Sustainable Finance, edX Climate courses

Course Policies

Attendance and Participation

- Attendance is mandatory for all sessions
- Maximum absences: 10% of contact hours (10.8 hours / approximately one full day)
- Exceeding absence limit results in non-certification
- Active participation expected in workshops, discussions, and group exercises
- Cameras on for any remote components; professional environment required

Academic Integrity

- All work must be original and properly attributed
- Proper citation required for all sources (APA or Chicago format)
- Collaboration permitted on workshop exercises but not on individual assignments
- Use of AI tools (ChatGPT, etc.) must be disclosed and properly cited
- Violations result in failing grade and possible program dismissal
- Honor code: signed acknowledgment required at program start

Late Submissions

- Late penalty: 10% per day (24-hour periods from deadline)
- Maximum late acceptance: 3 days
- After 3 days: zero grade unless extenuating circumstances with documentation
- Extensions available for documented medical/emergency reasons (request in advance when possible)
- Final project and presentation: no late submissions accepted

Grading Scale

- 90-100%: Distinction (awarded on certificate)
- 80-89%: Merit (awarded on certificate)
- 70-79%: Pass (certificate awarded)
- Below 70%: Fail (no certificate; may retake specific assessments)
- Minimum 70% required for certificate
- Distinction students eligible for recommendation letters

Technical Requirements and Support

- Laptop required for all sessions (Windows or Mac)
- Software pre-installation: Excel, Python (Anaconda distribution), PDF reader
- ESG platform access: provided via institutional licenses (training in Week 3)
- IT support: available via email and during breaks
- Technical setup session: optional pre-program session offered

Feedback and Assessment

- Assignments returned with detailed feedback within 10 business days
- Midterm project: feedback session available
- Office hours: weekly, 2 hours (schedule provided)
- Anonymous mid-program survey for continuous improvement
- Final program evaluation required for certificate

Diversity, Equity, and Inclusion

- Commitment to inclusive learning environment
- Accommodations available for documented disabilities
- Respectful dialogue expected; diverse perspectives valued
- Materials present global perspectives and diverse case studies
- Gender-inclusive language used throughout

Networking and Career Support

- Access to alumni network of green finance professionals
- Optional career coaching session (1 hour)
- LinkedIn group for cohort connection
- Job board access for green finance opportunities
- Guest speaker networking (when applicable)

Program Fees and Logistics

Tuition

- Program fee: [To be determined based on institutional pricing]
- Suggested range: $5,500 - $6,900 (competitive with Harvard, ICMA)
- Includes: All instruction, materials, ESG platform access, certificate
- Does not include: Accommodation, meals, travel, textbooks (readings provided)
- Payment plans available; early bird discount (register 8+ weeks in advance)

Instructor Information

[To be completed with instructor credentials and contact information]

Note: This syllabus is subject to modification with advance notice. Any changes will be communicated via email and updated syllabus posted to learning management system.

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