Salesforce **Data Cloud / Data 360** — End-to-End Course (basic → advanced) 

Sources & recommended official references: Trailhead / Trailhead Academy Data Cloud fundamentals, Salesforce Developer & Help docs (Data Cloud / Data 360), and Data Cloud query & object model guides. (trailheadacademy.salesforce.com)

Course roadmap (high level)

1. Foundations & Concepts (Module 1–2)
2. Data Ingestion & Modeling (Module 3–4)
3. Identity Resolution & Profiles (Module 5)
4. Segmentation, Calculated Insights & Activation (Module 6–7)
5. Querying, APIs & Developer Topics (Module 8–10)
6. Governance, Privacy, Monitoring & Cost Management (Module 11)
7. Advanced Use Cases, Integrations & Real-Time Activation (Module 12–13)
8. Capstone project + assessment (Module 14)

Module-by-module syllabus

Module 1 — Data Cloud / Data 360: Concepts & Architecture (FOUNDATION)

Duration: 3 hours

Learning objectives: Understand what Data Cloud (Data 360) is, how it fits in the Salesforce stack, and core capabilities (unified profiles, activation, real-time segmentation, zero-copy integrations). (Salesforce)

Topics:

- What is Data Cloud / Data 360 and business value (CDP concepts).
- High-level architecture: DLOs, DMOs, unified profiles, identity graph, activation destinations. (Salesforce Developers)
- Rebranding note: Data Cloud → Data 360 (what to expect in docs). (Salesforce Developers)

Lab: Walkthrough of Data Cloud UI (Trailhead lab / Academy SDC101). (trailheadacademy.salesforce.com)

Module 2 — Data Lake Objects (DLOs) & Data Model Objects (DMOs) — Modeling fundamentals

Duration: 6 hours (lecture + lab)

Prereq: Module 1

Learning objectives: Understand DLO vs DMO, mapping raw sources to a harmonized model, field types and constraints. (Salesforce Developers)

Topics:

- DLOs: ingestion containers & raw schema.
- DMOs: virtual/harmonized views; when to create custom DMOs.
- Mapping rules, data types, normalization, and enrichment points. (Salesforce)

Lab: Create a DLO, map fields to a DMO, validate types.

Module 3 — Data Ingestion & Streaming (BATCH & REAL-TIME)

Duration: 6–8 hours

Prereq: Modules 1–2

Learning objectives: Ingest data from CRM, marketing, e-commerce, data lakes; set up streaming connectors; zero-copy integrations (Snowflake/Databricks). (Salesforce)

Topics:

- Connectors: Salesforce sources (Sales/Service/Marketing Clouds), file/FTP, APIs, Streaming/CDC, and partner integrations.
- Data mapping patterns, schema evolution, incremental loads, error handling.
- Zero-copy architecture and using external tables (Snowflake/DB lakes). (Salesforce)

Lab: Configure sample ingestion from CSV and from a Salesforce org.

Module 4 — Data Quality & Transformation (ENRICHMENT)

Duration: 4–6 hours

Prereq: Module 3

Learning objectives: Implement data quality rules, transformations, normalization, enrichment (calculated fields).

Topics: Validation rules, deduplication pre-processing, transformations using Data Cloud calculated insights, scheduling transformations.

Lab: Implement a transform to standardize phone numbers and create calculated fields for lifetime value.

Module 5 — Identity Resolution & Unified Profiles (CORE)

Duration: 6–8 hours

Prereq: Modules 2–4

Learning objectives: Design match rulesets, reconciliation rules, and understand golden record principles. Learn determinist vs probabilistic matching and key-rings/graphs. (Salesforce)

Topics:

- Identity graph basics, match criteria, match methods (deterministic, fuzzy), reconciliation (which value wins).

- Identity rulesets lifecycle and performance considerations.
- Best practices for PII handling, consent, and compliance.

Lab: Build a ruleset: create match rules, run identity resolution on a test dataset, review unified profiles.

Module 6 — Segmentation & Calculated Insights (REAL-TIME PERSONAS)

Duration: 6 hours

Prereq: Module 5

Learning objectives: Create segments (real-time & scheduled), build calculated insights (aggregates, recency/frequency metrics), and use segments for activation.

Topics:

- Segment types: streaming vs batch; segmentation builder concepts.
- Calculated insights: aggregation, windowing, derived attributes.
- Use cases: churn detection, high-value customer segments.

Lab: Create a real-time segment (e.g., "Browsed product X in last 24h + purchase in last year = No") and a calculated LTV field.

Module 7 — Activation & Orchestration (Marketing/Service/Sales)

Duration: 6 hours

Prereq: Module 6

Learning objectives: Activate segments to Marketing Cloud, Advertising platforms, Salesforce CRM, or external systems; automate activation workflows. (Salesforce)

Topics:

- Activation destinations and connectors (Marketing Cloud, Email, Ads, custom APIs).
- Real-time vs scheduled activation; idempotency & consent propagation.
- Use with Journey Builder / Marketing Cloud and with Sales/Service flows.

Lab: Activate a segment to Marketing Cloud Audience or export to webhook and confirm delivery.

Module 8 — Querying Data Cloud (SQL / SOQL / Query APIs)

Duration: 6 hours

Prereq: Module 2 & 3 and Module 0 (SQL)

Learning objectives: Query DLOs/DMOs using Data Cloud SQL and SOQL where appropriate; use Query APIs; write efficient queries. (Salesforce Developers)

Topics:

- Data Cloud SQL syntax and limitations (read-only contexts), SOQL usage against DMOs/DLOs.

- Query performance, recommended practices, and limiting costs.
- Using Query APIs and SDKs for exports & analytics. (Salesforce Developers)

Lab: Write SQL queries to compute cohort metrics; use Query API to export results.

Module 9 — Developer & API Integration (ADVANCED)

Duration: 8 hours (lecture + coding labs)

Prereq: Module 8 + familiarity with Apex/JS/Python

Learning objectives: Use Data Cloud REST APIs/SDKs, integrate with Apex, build custom applications that consume calculated insights or profiles. (Salesforce Developers)

Topics:

- Data 360 APIs (profile API, query API), SDKs, auth patterns (OAuth), rate limits.
- Eventing and webhooks; building microservices to react to identity or segment changes.
- Examples: pull unified profile in Apex, call Data Cloud query from external app.

Lab: Build a small app that queries a profile and displays calculated insight via API.

Module 10 — Analytics, Reporting & BI connections

Duration: 6 hours

Prereq: Modules 2, 8, 9

Learning objectives: Connect Data Cloud to Tableau/Einstein/BI tools, create dashboards from DMOs, use calculated insights for analytics. (Salesforce Developers)

Topics:

- Tableau / Einstein integrations, building datasets from Data Cloud.
- Near real-time dashboards vs batch reports; sample KPIs (LTV, churn, engagement).

Lab: Build a Tableau extract / dashboard using Data Cloud dataset.

Module 11 — Governance, Security, Privacy & Cost Management

Duration: 4–6 hours

Prereq: Modules 1–6

Learning objectives: Understand data governance, PII handling, consent, audit logging, and controlling Data Cloud costs (consumption patterns). (Salesforce)

Topics:

- Data access controls, masking, encryption, deletion/retention policies.
- Audit trails, lineage, certification; compliance (GDPR, CCPA) considerations.
- Monitoring ingestion/query costs and best practices to reduce spend.

Lab: Implement role-based access for a DMO and simulate a data deletion request flow.

Module 12 — Real-time Use Cases & Streaming Architectures (Advanced)

Duration: 6–8 hours

Prereq: Modules 3, 6, 9

Learning objectives: Build real-time personalization, real-time journeys, and streaming ingestion patterns (Kafka/CDC).

Topics:

- Real-time personalization example flows (web personalization, in-app messaging).
- Integrating device IDs, ad platforms, and streaming connectors.

Lab: Build a working demo: real-time segment → webhook → front-end personalization response.

Module 13 — Advanced Identity, Graphs & ML-driven Insights

Duration: 6–8 hours

Prereq: Modules 5, 8, 9, 10

Learning objectives: Advanced identity graph work, using ML for probabilistic matching, leveraging Einstein/third-party ML models for predictions (churn/propensity). (Salesforce Developers)

Topics:

- Graph strategies, enrichment with device & behavioral signals, ML pipelines.
- Integrating external ML models and orchestrating model outputs into calculated insights.

Lab: Run a simple propensity model, store scores as calculated insights, and create a segment using the scores.

Module 14 — Capstone Project & Certification Preparation

Duration: 2–5 days (project) + 1 day exam prep

Prereq: All prior modules

Capstone options (choose 1):

- Build an end-to-end Data Cloud solution: ingest CRM + e-commerce + web events, perform identity resolution, build LTV & propensity calculated insights, create segments, and activate to Marketing Cloud for a campaign.
- Real-time personalization demo with segment activation to a web widget and CRM case creation for high-value customers.

Deliverables: Architecture diagram, implementation walkthrough, demo, cost & governance plan, test results.

Quick reference: Official learning & docs (start here)

- Trailhead Academy — Data Cloud fundamentals (SDC101). (trailheadacademy.salesforce.com)
- Data 360 / Data Cloud Developer Guide & Query Guide (APIs, SQL). (Salesforce Developers)
- Help articles: Identity Resolution, Data Lake Objects, Data Model Objects. (Salesforce)
- Certification prep: Data Cloud Consultant study guide. (Trailhead)
