

Course and learning-product design for engineering faculties

I help university teams connect course structure, applied cases, scientific visuals and interactive products, with clear review gates and source files the institution can carry forward.

University lecturer · Doctoral researcher in electrical engineering · ALFA co-author · Montréal · English / French

Institutional value

A bounded way to decide where to intervene, review a representative slice and retain the sources, decision record and operating notes needed to continue.

Four service families

Course and curriculum design Diagnosis, learning-sequence mapping, activity and assessment alignment, production brief.	Applied cases and mini-projects Case assumptions, data or simulation specification, learner brief, instructor notes and rubric.
Scientific visuals and interactive products Editable figures, responsive prototypes, bilingual treatment and accessibility QA.	Learning-product architecture and improvement Content models, release workflow, quality checks, training and handover.

Selected public and inspected evidence

MTH1008	Applied-linear-algebra course assets and selected mini-projects; signed sources inspected; current university teaching publicly listed.
The Kinetic Kernel	Public bilingual linear-algebra learning product; interactive chapter and audited repository role.
ALFA	Collective open textbook; co-author since May 2025; seven studies individually signed; current 673-page version dated 26 Aug 2026.
Research	European Journal of Control (2026) and IEEE CCTA (2024) publications in nonlinear-system control with GRU models.

Evidence is labelled as public, inspected source material or observable output. No student-learning impact, adoption metric or institutional endorsement is claimed.

andreagourion.com/work · [Public Kinetic Kernel chapter](#) · [Current ALFA PDF](#)

One difficult learning sequence, one representative case/visual/interaction, six review gates and a transferable handover.

Week	Reviewable output	Institution decision
1	Charter, source inventory, risk log	Problem, audience, boundary
2	Current and target sequence map	Prerequisites and sequence
3	Applied-case brief and assumptions	Representative case
4	Low-fidelity visual/interaction prototype	Representation before build
5	Editable production slice	Production pattern
6	Integrated slice and access review	Remediation priorities
7	Academic review and evidence summary	Accept or assign findings
8	Sources, operating notes, scale options	Stop, iterate or scale

Planning allowance to confirm: sponsor ≈ 5 hours total; subject-matter expert ≈ 10 hours total. No identifiable student data is required by default.

Practice standards

Accessibility WCAG 2.2 AA is the implementation target within scope; keyboard, reflow, contrast, motion and alternatives are reviewed.	Privacy Minimise data; keep sensitive assets out of public and unapproved environments.	AI Follow client policy; retain traceability and human review; never accept model output as the sole authority.
IP and attribution Inventory source, engagement-created and third-party assets; record rights, credits and restrictions.	No lock-in Define editable sources, common formats, dependencies and maintenance notes before approval.	

Best fit

Quantitative content must be understood before it is designed; the institution can provide a sponsor and subject-matter reviewer; editable handover matters.

Review the full pilot at andreagourion.com/pilot · Prepare a conversation: contact@andreagourion.com

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