

Transportation

France has one of the densest and most efficient transportation networks in the world, including highway, rail and waterway networks, and a range of mass transit systems (buses, subways, and streetcars). The European consortium Airbus, Aéroports de Paris, Air France-KLM, high-speed TGV train services, SNCF, and automobile brands Renault, Peugeot and Citroën are the crowning jewels of French excellence in international transportation, recognized for their technology, production, and operation logistics. For 50 years, logistics has been used in businesses outside of a military context in the large-scale distribution sector for the transportation of merchandise, in the automobile industry, and more generally for organizing production or service processes. Large companies now have a dedicated logistics department for this interdisciplinary function. Transportation logistics cover the management and maintenance of physical systems just as much as the development of information systems that assist in management and company strategy. Locating factories and warehouses, the supply of inputs such as fuel for transportation vehicles, the physical management of unfinished goods, packaging, and inventory systems and management are some of the many operations that require coordinated systems and transportation to ensure delivery. In industry and distribution, logistical expertise has shifted toward business strategy and is now oriented toward defining and organizing the flow of information and goods from a product's conception through its delivery, and requires a high level of qualification (master's and engineering specialization). Training programs in the field of transportation logistics focus on the management sciences just as engineering sciences focus on technological, economic, and managerial development. The programs also incorporate technical components (such as vehicle maintenance), organization (for information processing, monitoring, and flow management), and operational skills (for the management of all processes in the logistical chain). Close to 100 programs are offered in the logistical management of transportation complemented by specializations in law and economics and management and technical courses.

Transportation and logistics by the numbers

- 84.7 million international tourists visit France each year (2013)
- 40,000 managers specialized in logistics
- 30,000 km of railways
- 11,000 km of highways and roads
- 8,500 km of waterways
- 2,000 km of high-speed rail tracks

Source: MEDDE - www.developpement-durable.gouv.fr

INTERNATIONAL

Large French transportation and logistics groups are active on all continents.

- The **Alstom Group** provides signaling and train control systems for subways (Bangalore, India, in 2011), as well as new suburban trains in Ottawa (Canada), the Coradia Lint regional trains (Hamburg in 2015), and the Nottingham Express Transit (NET). Alstom and its Chinese joint venture, Shanghai Alstom Transport Electrical Equipment (SATEE), also provide traction systems (Nanjing subway). www.alstom.com/Transport/fr
- The **SYSTRA Group**, of which SNCF and RATP are the two principal shareholders, specializes in urban transport and rail transport engineering: streetcars (self-driving), subways, and rapid transit bus engineering for various projects in Algiers, Dubai, Santiago de Chili and Mexico City, the high-speed train system between Seoul and Busan (South Korea) and Kenitra-Tangier (Morocco), the Hanoi subway, the New Delhi subway, the Shenzhen (China) subway, and the Kaohsiung (Taiwan) subway. www.systra.com
- **CMA CGM**, based in Marseille, is the world's third-largest container shipping group. The firm has over 650 offices and agencies in more than 150 countries. It possesses 445 ships and operates in 450 of the world's 521 commercial ports. It controls the logistics chain by offering a complete door-to-door service while integrating water transportation (River Shuttle Containers) and rail transportation (CMA Rail) as well as cargo handling and land-based logistics. www.cma-cgm.fr
- **Bolloré Africa Logistics** is an integrated logistics network based in Africa, with 250 agencies in 45 countries. It acts as a port operator (management of container port terminals, on-board cargo handling, and shipping) and land-based operator (transit, waterway and roadway transportation, storage and stocking, packaging, and delivery). www.bolloré-africa-logistics.com
- **Aéroports de Paris**, which processed 92.7 million passengers in Paris 2014, is the second-largest European airport. It manages 35 airports worldwide. www.aeroportsdeparis.fr
- **Société Nationale des Chemins de Fer** (SNCF) assists in the management of the Casablanca-Algiers high-speed train (TGV) project, which is financed by the Moroccan government and the French Development Agency. www.sncf.com

Related fields

Business – Law – Electronics – Energy – Management – Industry – Engineering – Computer science – Languages – Mechanics – Management practices – Human resources – Services – IT – Tourism

Subfields

Aerial technology - Supply - Assistance - Insurance - Robotics - Office equipment - Logistical chain - International trade - Communication - Accounting - Relocation - International law - Rail - Waterways - Flows - Freight - Project management - Inventory management - Maintenance - Merchandise - Shipping - Negotiation - Organization - Platforms - Pollution - Production - Processes - Networks - Roads - Vehicle systems - Industrial vehicles - Sales - Information systems - Emergencies - Transportation methods - Passengers

Useful links

- Apprendre et se Former en Transport et Logistique (AFTRAL): www.aftral.com
- Association Française de la Supply chain et de la Logistique (ASLOG): www.aslog.org
- CTUE – Urban Transport Driver in Europe (Leonardo da Vinci European program): www.ctue-project.org
- Energeco - Controlling fuel consumption in roadway transportation: www.energeco.org
- École Supérieure des Techniques Aéronautiques et de Construction Automobile (ESTACA): www.estaca.fr
- European Transport Training Association (EuroTra): www.eurotra.eu
- National group of combined transportation: <http://gntc.asso.fr>
- Groupe Promotrans (training in transportation, logistics, and maintenance): www.promotrans.fr
- Institut Français des Sciences et Technologies des Transports, de l'Aménagement et des Réseaux (IFSTTAR): www.ifsttar.fr
- Institut National des Transports Internationaux et des Ports (ITIP): <http://itip.cnam.fr>
- Institut Supérieur de l'Automobile et des Transports (ISAT): www.isat.fr
- Institut Supérieur du Transport et de la Logistique Internationale (ISTELI): www.aftral.com/ecoles/isteli
- Institut Supérieur du Transport et de la Logistique in Casablanca (Moroccan campus): www.istl.ma
- French Ministry of Ecology, Sustainable Development, Transportation, and Housing: www.developpement-durable.gouv.fr>Transports
- French Federation of Transportation and Logistics Companies (TLF): www.e-tlf.com
- EU transportation policy: http://europa.eu/pol/trans/index_fr.htm
- International Union for Road-Rail Combined Transportation: www.uirr.com
- International Road Transportation Union: www.iru.org
- Voies navigables de France (VNF): www.vnf.fr

CHOOSE YOUR PROGRAM

- Campus France program catalogue: www.campusfrance.org>Trouvez votre formation
- Catalogue of programs taught in English: www.campusfrance.org>Programs Taught in English
- Catalogue of short academic programs and language courses: www.coursdete.campusfrance.org
- CampusBourses, financing your studies in France: www.campusfrance.org>Financez vos études

Licence level

Diplôme de technicien supérieur (DTS) (Secondary diploma +2 years of higher education) – L2

Students can earn a *diplôme de technicien supérieur* in **transportation and logistics** in one of four areas:

- **Passenger transportation;**
- **Logistic methods and uses;**
- **Logistics of air and water transportation;**
- **Logistics of land transportation.**

Listed on the National Register of Professional Certifications (CFA), the DTS is offered at apprentice training centers (CFA's), the Institut Supérieur du Transport et de la Logistique Internationale (ISTELI), and the Institut National des Transports Internationaux et des Ports (ITIP), which offer two-year programs for professionals in the international multimodal transportation chain (maritime, road, rail, air, and water).

- ISTELI: www.aftral.com/ecoles/isteli>Les Formations
- ITIP: <http://itip.cnam.fr>

Brevet de Technicien Supérieur (BTS) (Secondary diploma + 3 years of higher education) – L2

The **BTS in transportation and logistical services** is offered by public or private high schools and higher education institutions in 50 French cities.

Diplôme Universitaire de Technologie (Secondary diploma + 3 years of higher education) – L2

Offered by 40 university-affiliated technology institutes (IUT), the **DUT in logistics and transportation management** teaches management and operation techniques for application in transportation companies.

- Network of technology institutes: www.iut-fr.net

Licence (Secondary diploma + 3 years of higher education) – L3

50 professional *licences* are offered in **logistics and transportation** in three broad fields:

Law, economics, and management, which covers legal activities related to merchandise transportation, trade, and logistics, as well as transportation organizations and maritime transportation law.

Sciences, technologies, and health, which covers logistics and maintenance, industrial processes (recycling and recovery of transportation materials), industrial electronics and information technology applied to transportation industries.

Humanities and social sciences, which covers the logistics of passenger transportation.

Master level

Master (Secondary diploma +5 years of higher education) – M2

50 master's programs are offered in three broad fields:

- **Law, economics, and management** with two specializations: urban and regional passenger transport, and transportation, space and systems.
- **Humanities and social sciences** with specializations in urban planning, land-use planning, and the environment (use and development of public transportation systems), urban life, the environment, and transportation for mobility, way of life, and urban environments and services.
- **Sciences, technologies, and health** with specializations in new technologies, transportation security, robotics, information systems, decision assistance in logistics and transportation, systems engineering for aeronautics and transportation, intermodality, and territory.

Diplôme/Titre d'ingénieur – Master level (Secondary diploma +5 years of higher education) – M2

French engineering schools confer degrees accredited by the *Commission des Titres d'Ingénieur* (CTI):

- The École d'Ingénieurs du Conservatoire National des Arts et Métiers (EI CNAM) offers a program in **rail transportation management**. <http://ecole-ingenieur.cnam.fr>
- The École des Ponts ParisTech offers an engineering program for careers in land and urban planning in the field of **transportation** and the **environment**. www.enpc.fr/node/517
- The École Supérieure des Techniques Aéronautiques et de Construction Automobile (ESTACA) equips students with multidisciplinary skills in engineering science and **transportation engineering**. www.estaca.fr
- The École Nationale Supérieure de Mécanique et d'Aérotechnique (ISAE-ENSMA) specializes in **aeronautic and land transportation**. www.isae-ensma.fr
- The program offered by the Institut Supérieur de l'Automobile et des Transports (ISAT) at the Université de Bourgogne focuses on mechanics, product redesign, and innovative processes. www.isat.fr
- The Institut Supérieur d'Études Logistiques (ISEL) at the Université du Havre offers an engineering degree in **logistics**. www.isel-logistique.fr
- The Institut Supérieur de l'Automobile et des Transports de Nevers at the Université de Dijon offers a specialization in **industrial design** in partnership with the Institut des Techniques d'Ingénieurs de l'Industrie (ITII) de Bourgogne. www.itiiibourgogne.com

Beyond the master level

Mastères Spécialisés (MS, specialized master) (Master +1 year of higher education) – post-M

There are fifteen specialized master's programs labeled by the *Conférence des Grandes Écoles*. Students may pursue the specialized master after obtaining an engineering degree, a master's degree, or equivalent. It supplies students with an institutional credential attesting to dual competence in transportation and/or logistics:

- Marine engineering: transportation, energy, and sustainable development;
- Logistics and purchasing: international exchange, organizational innovation, management (manufacturing projects, logistical systems, and supply chains), and logistics chains (activities, purchasing, and production);
- Air transportation management;
- Rail and other guided transportation systems.

Information on MS degrees:

www.campusfrance.org/fr/ressource/les-masteres-specialises-ms

- List of MS programs: www.cge.asso.fr/nos-labels/ms