



**POLITECNICO**  
MILANO 1863

Repubblica Italiana  
In nome della Legge

NOI PROF. ING. FERRUCCIO RESTA RETTORE DEL

# POLITECNICO DI MILANO

visti gli attestati degli studi compiuti  
visto il risultato della prova finale superata il giorno 7 ottobre 2021  
conferiamo a

**Siva Teja Sowrya Yannana**

nato a Kakinada (India) il giorno 21 maggio 1996

**la Laurea Magistrale in**

Ingegneria per l'Ambiente e il Territorio - Environmental and Land Planning Engineering  
Classe delle Lauree n. LM-35 - Ingegneria per l'Ambiente e il Territorio

Il presente diploma viene rilasciato a tutti gli effetti di legge.

Milano, addì 7 ottobre 2021

Il Direttore Generale  
Graziano Dragoni

Il Rettore  
Ferruccio Resta

1021-0594

Il Preside della Scuola  
Alberto Taliervo



## INTRODUCTION

The purpose of the Diploma Supplement is to provide sufficient independent data to improve the international '*transparency*' and fair academic and professional recognition of qualifications (diplomas, degrees, certificates etc.). It is designed to provide a description of the nature, level, context, content and status of the studies that were pursued and successfully completed by the individual named on the original qualification to which this supplement is appended. It is free from any value judgements, equivalence statements or suggestions about recognition. This Diploma Supplement model was developed by the European Commission, Council of Europe and UNESCO.

### 1 INFORMATION IDENTIFYING THE HOLDER OF THE QUALIFICATION

#### 1.1 Last name(s)

YANNANA

#### 1.2 First name(s)

SIVA TEJA SOWRYA

#### 1.3 Date of birth (dd/mm/yyyy)

21/05/1996

#### 1.4 Student identification number or code (if available)

919333

### 2 INFORMATION IDENTIFYING THE QUALIFICATION

#### 2.1 Name of the qualification and title conferred (in the original language)

Laurea magistrale in ENVIRONMENTAL AND LAND PLANNING ENGINEERING  
Dottore magistrale

#### 2.2 Main field(s) of study for the qualification

Environmental engineering (LM-35)  
ISCED code: 0712

#### 2.3 Name (in original language) and status of the awarding institution

Politecnico di Milano (Istituzione statale), Piazza Leonardo da Vinci 32, 20133 Milano

#### 2.4 Name and status of institution (if different from 2.3) administering studies (in original language)

Same as in 2.3

#### 2.5 Language(s) of instruction/examination

English

**3**
**INFORMATION ON THE LEVEL AND DURATION OF THE QUALIFICATION**
**3.1**
**Level of qualification**

Second Cycle QF-EHEA - Level 7 EQF

**3.2**
**Official duration of the programme in credits and/or years**

120 CFU/ECTS - 2 full time years

**3.3**
**Access requirement(s)**

First cycle degree (level 6 EQF) or comparable qualification

The admission to Laurea Magistrale (equivalent to Master of Science) is subject to an assessment process that aims to verify the candidate's adequacy. This process, according to the Law (D.M. 22/10/2004 n. 270 art. 6 comma 2 and D.M. del 16/3/2007, art.6 comma 1), is based on curricular requirements and on assessing the student's suitable preparation

**4**
**INFORMATION ON THE CONTENTS AND RESULTS GAINED**
**4.1**
**Mode of study**

This course requires a full time attendance and involves classroom and laboratory activities.

**4.2**
**Programme learning outcomes**

Graduates will:

- possess in-depth knowledge of the theoretical and scientific aspects of mathematics and other base sciences and be able to use this knowledge to interpret and describe complex engineering problems or problems that require an interdisciplinary approach;
- possess in-depth knowledge of the theoretical and scientific aspects where complex problems that require an interdisciplinary approach can be identified, formulated and solved through an innovative approach;
- be able to ideate, plan, design and manage complex and/or innovative systems, processes and services;
- be able to design and manage highly complex experiments;
- possess context knowledge as well as the ability to think flexibly;
- possess knowledge of company and professional culture;
- be able to speak and write fluently in at least one European Union language, other than Italian, for professional purposes.



### 4.3 Programme details, individual credits gained and grades/marks obtained

SSD Code	Code	Educational activities	CFU/ECTS credits	Recognition	Grade	Date
ICAR/03	099296	WATER AND WASTEWATER TREATMENT TECHNOLOGIES	8.00		25	09/01/2019
CHIM/07	095857	BASIC OF GREEN AND SUSTAINABLE CHEMISTRY	8.00		26	14/01/2019
MAT/07	095853	MATHEMATICAL PHYSICS	8.00		26	12/02/2019
ICAR/02	095854	WATER AND FOOD SECURITY	8.00		23	18/07/2019
ICAR/03	051746	POLLUTION MEASUREMENT AND MANAGEMENT [I.C.]	10.00		29	24/07/2019
ICAR/02	051105	RIVER ENGINEERING AND BASIN RECLAMATION	10.00		25	14/01/2020
ICAR/02	050693	WATER RESOURCES MANAGEMENT	6.00		27	30/01/2020
ICAR/06	051278	PHOTOGRAMMETRY AND DRONE SURVEYING	10.00		25	13/02/2020
ICAR/01	096950	GROUNDWATER HYDRAULICS	10.00		24	16/07/2020
ICAR/20	095874	URBAN RENEWAL AND PLANNING	10.00		28	23/07/2020
BIO/07	097461	ECOSYSTEMS CONSERVATION AND MANAGEMENT	10.00		25	11/01/2021
ING-IND/33	051179	ELECTRIC SYSTEMS FOR TRANSPORTATION	10.00		27	09/02/2021
	097466	FINAL DEGREE THESIS(12 CPS)	12.00		--	17/09/2021
<b>Total CFU/ECTS credits</b>			<b>120</b>			

#### Thesis/Final Exam

Title	Supervisor	Reference discipline
Measurement methods for chlorine dioxide: affecting factors and preliminary evaluations	ANTONELLI MANUELA	ICAR/03 - SANITARY AND ENVIRONMENTAL ENGINEERING

### 4.4 Grading system and, if available, grade distribution table

Individual subjects are graded on a scale from 18 to 30, with 18 and 30 as minimum and maximum grade respectively. A "cum laude" can be added to the maximum grade as a special distinction.

#### GRADE DISTRIBUTION TABLE

ISCED code: 0712			Environmental engineering (LM-35)									Second Cycle QF-EHEA - Level 7 EQF		
GRADE	18	19	20	21	22	23	24	25	26	27	28	29	30	30 cum laude
N marks	142	92	131	127	179	243	357	406	475	582	582	326	563	219
%	3,21	2,08	2,96	2,87	4,05	5,49	8,07	9,18	10,74	13,16	13,14	7,37	12,73	4,95
Cumulative %	100,00	96,00	94,00	91,00	88,00	84,00	79,00	71,00	62,00	51,00	38,00	25,00	17,00	4,00
Years considered: from 01/11/2017 to 31/10/2020									Total number of final marks considered: 4424					

**4.5 Overall classification of the qualification (in original language)**

Final mark: 98/110

Date 07/10/2021

For I and II cycle programmes the final grade is based on a maximum of 110 points, with 66/110 as the lowest passing grade. In case of excellence, 110 cum laude may be awarded. The final grade is based on the curriculum as well as on the final exam.

**GRADE DISTRIBUTION TABLE**

Environmental engineering (LM-35)			
ISCED code: 0712		Second Cycle QF-EHEA - Level 7 EQF	
GRADE	N marks	%	Cumulative %
78	1	0.27	100,00
80	1	0.27	99,00
81	2	0.54	99,00
82	1	0.27	98,00
84	4	1.09	98,00
85	1	0.27	97,00
86	3	0.82	97,00
87	2	0.54	96,00
88	2	0.54	95,00
89	1	0.27	95,00
90	5	1.36	95,00
91	5	1.36	93,00
92	6	1.63	92,00
93	2	0.54	90,00
94	5	1.36	90,00
95	12	3.26	88,00
96	4	1.09	85,00
97	10	2.72	84,00
98	11	2.99	81,00
99	9	2.45	78,00
100	14	3.80	76,00
101	12	3.26	72,00
102	17	4.62	69,00
103	25	6.79	64,00
104	16	4.35	57,00
105	22	5.98	53,00
106	21	5.71	47,00
107	16	4.35	41,00
108	21	5.71	37,00
109	13	3.53	31,00
110	42	11.41	28,00
110 cum laude	62	16.85	16,00
Years considered: from 01/11/2017 to 31/10/2020			
Total number of final marks considered: 368			

**5**
**INFORMATION ON THE FUNCTION OF THE QUALIFICATION**
**5.1**
**Access to further study**

The qualification grants access to "Dottorato di Ricerca" (Research Doctorate), "Corso di Specializzazione di secondo livello" (2nd level Specialization Course) and "Master Universitario di secondo livello" (2nd level University Master)

**5.2**
**Access to a regulated profession (if applicable)**

Gives access to the state exam required to practice as: INGEGNERE CIVILE AMBIENTALE, INGEGNERE CIVILE AMBIENTALE IUNIOR

**6**
**ADDITIONAL INFORMATION**
**6.1**
**Additional information**
**ADDITIONAL COURSE UNITS TAKEN**

SSD Code	Code	Educational activities	CFU/ECTS credits	Recognition	Grade	Date
ICAR/03	054848	SOLID WASTE MANAGEMENT AND TREATMENT	10.00		20	13/07/2020

**6.2**
**Further information sources**

<http://www.polimi.it/>; <http://www.miur.it/>;

**7****CERTIFICATION OF THE SUPPLEMENT****7.1****Date (\*)****7.2****Signature (\*)**

Dott.ssa Assunta Marrese

**7.3****Capacity**

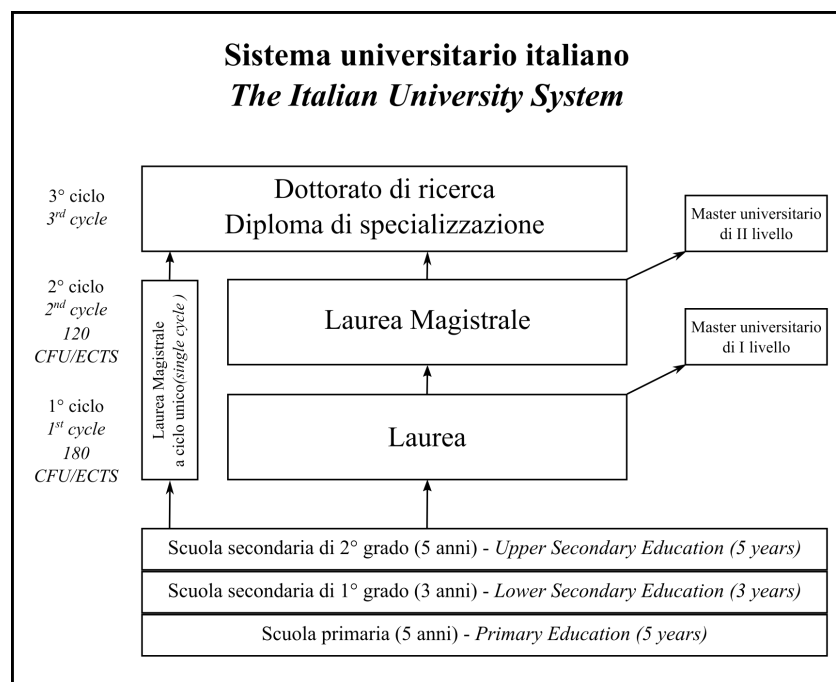
La Dirigente dell'Area Didattica

**7.4****Official stamp or seal (\*)**

(\*) Date, signature and stamp are available only if requested by the holder of the Diploma Supplement

**8**
**INFORMATION ON THE NATIONAL HIGHER EDUCATION SYSTEM**

The Italian university system is organised in three cycles, according to the Bologna structure: the main academic degrees are the Laurea (1st cycle), the Laurea Magistrale (2nd cycle) and the Dottorato di Ricerca (3rd cycle). The system also offers other study programmes and related qualifications.


**First cycle**

This cycle consists exclusively of Corsi di Laurea. These degree programmes provide students with an adequate command of general scientific methods and contents as well as with specific professional skills. The general access requirement is the Italian school leaving qualification awarded after completion of 13 years of schooling and passing the relevant State examination; comparable foreign qualifications may also be accepted. Admission to some degree courses may be based on specific course requirements. The studies last 3 years. The Laurea is awarded to students who have gained 180 ECTS credits (called Crediti Formativi Universitari - CFU) and satisfied all curricular requirements, including the production of a final written paper or equivalent final project. The Laurea gives access to the Corsi di Laurea Magistrale as well as to other 2nd cycle study programmes.

**Second cycle**

The main degree programmes in this cycle are the Corsi di Laurea Magistrale. They provide education at an advanced level for the exercise of highly qualified activities in specific areas. Access is by a Laurea degree or a comparable foreign degree; admission is based on specific course requirements determined by single universities. The studies last 2 years. The Laurea Magistrale degree is awarded to students who have gained 120 ECTS/CFU credits and satisfied all curricular requirements, including the production and public defence of an original dissertation.

Some programmes (namely, those in dentistry, medicine, veterinary medicine, pharmacy, architecture, construction engineering/architecture, law, primary education) are defined "single cycle programmes" (Corsi a ciclo unico); for these programmes access is by the Italian school leaving qualification (or a comparable foreign qualification); admission is based on entrance exams. The studies last 5 years (6 years and 360 ECTS/CFU credits in the cases of medicine



and dentistry). A Laurea Magistrale degree is awarded to students who have gained 300 ECTS/CFU credits and satisfied all curricular requirements, including the production and public defence of an original dissertation.

A Laurea Magistrale degree gives access to Corsi di Dottorato di Ricerca as well as to other 3rd cycle study programmes.

### Third cycle

The main degree programmes in this cycle are Corsi di Dottorato di Ricerca (research doctorate programmes); the students/young researchers enrolled in these programmes will acquire methodologies for advanced scientific research, will be trained in new technologies and will work in research laboratories, wherever appropriate. Access is by a Laurea Magistrale degree (or a comparable foreign degree); admission is based on a competitive exam; studies last at least three years and include the completion and public defence of an original research project.

### Other programmes

- **Corsi di Specializzazione:** these are 3rd cycle programmes intended to provide students with the knowledge and skills required for the practice of highly qualified professions, mainly in medical, clinical and surgical specialities. Admission is by a Laurea Magistrale degree (or by a comparable foreign degree) and is based on a competitive exam; studies may last from 2 (120 ECTS/CFU credits) to 6 years (360 ECTS/CFU credits) depending on the discipline. The final degree awarded is a Diploma di Specializzazione.
- **Corsi di Master Universitario di primo livello:** these are 2nd cycle programmes intended to provide students with further specialization or higher continuing education after completion of the first cycle. Access is by a Laurea degree (or a comparable foreign degree); admission may be subject to additional requirements. Studies last at least 1 year (60 ECTS/CFU credits). The qualification awarded (Master Universitario di primo livello) does not give access to Corsi di Dottorato di Ricerca or to any other 3rd cycle programme, since this type of course does not belong to the general requirements established at national level, but it is offered under the autonomous responsibility of each university.
- **Corsi di Master Universitario di secondo livello:** these are 3rd cycle programmes intended to provide students with further specialization or higher continuing education studies after completion of the second cycle. Access is by a Laurea Magistrale degree (or a comparable foreign degree); admission may be subject to additional requirements. Studies last at least 1 year (60 ECTS/CFU credits). The qualification awarded (Master Universitario di secondo livello) does not give access to Corsi di Dottorato di Ricerca or to any other 3rd cycle programmes, since this type of course does not belong to the general requirements established at national level, but it is offered under the autonomous responsibility of each university.

### CREDITS

Degree courses are structured in credits (Crediti Formativi Universitari - CFU). University credits are based on the workload students need in order to achieve the expected learning outcomes. Each credit corresponds to 25 hours of student workload, including independent study. The average workload of a full time student is conventionally fixed at 60 credits per year. Thus, the CFU fully coincide with ECTS credits

### **Classes of Degree Courses**

All degree programmes of Laurea and Laurea Magistrale sharing general educational objectives are grouped into "classes". In developing the specific learning outcomes of single programmes, Universities have to comply with some national requirements for each class concerning the types (and corresponding amount of credits) of teaching-learning activities to be included. Degrees belonging to the same class have the same legal value.

### **Academic Titles**

Those who receive the Laurea are entitled to be called "Dottore", the holders of a Laurea Magistrale have a right to the title of "Dottore Magistrale", the Dottorato di ricerca confers the title of "Dottore di Ricerca" or "PhD".

### **Joint Degrees**

Italian universities are allowed to establish degree programmes in cooperation with Italian and foreign partner universities, on completion of which joint or double/multiple degrees can be awarded.

### **Further information**

Italian Qualifications Framework (Quadro dei Titoli Italiani - QTI) <http://www.quadrodeititoli.it>