



MINISTERUL EDUCAȚIEI ȘI CERCETĂRII
UNIVERSITATEA „OVIDIUS” DIN CONSTANȚA
B-dul Mamaia 124, 900527 Constanța, România
Tel./Fax: +40 241 606407, +40 241 606467
E-mail: rectorat@univ-ovidius.ro
Webpage: www.univ-ovidius.ro

Universitatea „Ovidius” din Constanța

AVIZAT D S A C

Universitatea Ovidius din Constanța (IOSUD)
Scoala doctorală de Matematica

Domeniul/domeniile de doctorat: Matematica
Ciclul de studii: III

Forma de învățământ: cu frecvență (IF);
frecvență redusă (FR)
Durata studiilor: 3 ani

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII

ANEXA 4



UNIVERSITATEA „OVIDIUS” DIN CONSTANȚA
SCOALA DOCTORALA DE MATEMATICA

PLAN DE ÎNVĂȚĂMÂNT

(conține 8 pagini)



Domeniul de doctorat: **Matematica**
Ciclul de studii: **III**
Programul de studii: **Studii universitare de doctorat**
Durata studiilor: **3 ani**
Forma de învățământ: **cu frecvență (IF); frecvență redusă (FR)**

Valabil începând cu anul universitar 2020 - 2021



Rector,

Director CSUD,

Director Școala doctorală,



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1. THE MISSION OF THE STUDY PROGRAMME

Ovidius University of Constanta (OUC) has the mission to produce, maintain and distribute knowledge to the society through education, scientific research and artistic works at the EU levels. OUC is first concerned with Constanta town, but it has an important impact in the Black Sea area, in Europe and beyond it. Inside OUC the Faculty of Mathematics and Informatics (FMI) is a stable and strong structure, with teachers of a high scientific level, a good teaching schedule and having a top position among romanian universities. Through its mission, which follows the OUC one, FMI obtained and mentained at a top level the Bachelor and Master programmes in Mathematics and Informatics. In parallel was founded also the Doctoral School in Mathematics (DSM), according OM 7187/1992, OM 1805/2007 and HG 778/2015. According to its mission DSM is developing highly qualified specialists for scientific research, who get the PhD degree after defending the PhD Thesis. The main objective of DSM is to prepare top level scientists who can produce new and important results in different subdomains of Mathematics as well as in inter and/or transdisciplinary areas. Both in the University Advanced Studies step (first year of the PhD programme) and Scientific Research step (years 2 and 3 of the PhD programme) the PhD students get top level professional skills in the subdomains of Mathematics covered by the PhD advisors of the School: Numerical Analysis, Functional Analysis, Probabilities and Statistics, Solid Mechanics and Algebra, as well as cross-cutting skills.

A. Professional skills:

- an advanced knowledge in the (sub)domains of the PhD programme;
- identification and solution of the appropriate research problems;
- top level methods in advanced scientific research;
- the management of research projects;
- learning the principles of ethics in the scientific research;
- skills for writting scientific papers;

B. Cross-cutting skills:

- using the new technologies in information and communication;
- working in a research team;
- skills for leading professional and research teams;
- knowledge on plagiarism and copyright principles.



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2. QUALIFICATION, OPPORTUNITIES FOR THE INCLUSION IN THE LABOR MARKET (ACCORDING TO COR 2017)

Leader in the domain of research and/or development (1223), Leader in different level teaching institutions (1345), Researcher in Mathematics (212015), Researcher in Mechanics (212017), Researcher in matematica aplicata (212019), Researcher in Mathematical Physics (212021), Researcher in Mathematical Informatics (212023), 2330 Teachers in gymnasiums and high schools (2330), University teachers (2310)

3. ADMISSION

The admission colloquium at the PhD programme is held in the month of September, following a schedule approved by the OUC Senate. It consists on two challenges: an interview and an oral discussion upon a scientific subject proposed by the candidate according with the topics of the DSM.

4. EDUCATION QUALIFICATION

PhD diploma



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PLAN DE ÎNVĂȚĂMÂNT

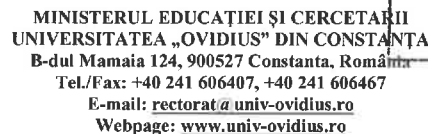
Programme of university advanced studies

Nr. crt.	Course ID	*C1	**C2	Courses	Number of hours per course																
					First semester						Second semester										
					C	S	L	P	F.V.	CR	C	S	L	P	F.V.	CR	Total	Cour se	Appl cation s		
1.				MODULE 1 – Numerical Analysis																	
2.	SDM11	DSP	DI	Matrix decompositions and least squares problems	2					E	6							24	24		
3.	SDM12	DSP	DI	Iterative methods for linear systems	2					E	6							24	24		
4.	SDM13	DSP	DO	Projection algorithms in image reconstruction	2					C	6							24	24		
5.	SDM14	DSI	DC,DO	Methodology of scientific research																	
6.	SDM15	DSP	DI	Orthogonalization and regularization techniques	2					E	6							24	24		
7.	SDM16	DSI	DC,DI	Ethics and academic integrity	2					E	6							24	24		
8.				Hours per week / number of verification procedures / ECTS	10					4e+1c	30							120	120		
9.				MODULE 2 – Numerical Analysis																	
10.	SDM21	DSP	DI	Matrix decompositions and least squares problems	2					E	6							24	24		
11.	SDM22	DSP	DI	Iterative methods for linear systems	2					E	6							24	24		
12.	SDM23	DSP	DO	Discretization of boundary value problems	2					C	6							24	24		
13.	SDM24	DSI	DC,DO	Methodology of scientific research																	
14.	SDM25	DSP	DI	Gradient methods and preconditioning	2					E	6							24	24		
15.	SDM26	DSI	DC,DI	Ethics and academic integrity	2					E	6							24	24		
16.				Hours per week / number of verification procedures / ECTS	10					4e+1c	30							120	120		

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AVIZAT D S A C

29/SEP/2020

Domeniul/domeniile de doctorat: Matematica
Ciclul de studii: III

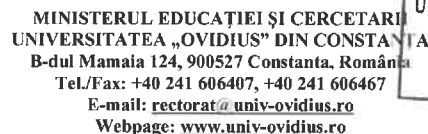
Forma de învățământ: cu frecvență (IF);
frecvență redusă (FR)
Durata studiilor: 3 ani

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AVIZAT D S A C

79/SEP/2020

Forma de învățământ: cu frecvență (IF);
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[illegible]

Director Scoala doctorală,



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Universitatea "Ovidius" din Constanța

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APROBAT ÎN ȘEDINȚA SENATULUI UOC
DIN DATA DE:

29 SEP 2020

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56.				Hours per week / number of verification procedures / ECTS	2				1e	6	8				3e+1c	24	120	120	
57.				MODULE 8 – Algebra															
58.	SDM81	DSP	DI	Fundamental Algebraic Structures							2				E	6	24	24	
59.	SDM82	DSP	DI	Special classes of algebras. Applications							2				E	6	24	24	
60.	SDM83	DSP	DO	Representation Theorems of Cassels and Pfister types							2				C	6	24	24	
61.	SDM84	DSI	DC,DO	Methodology of scientific research															
62.	SDM85	DSP	DI	Quadratic forms over fields							2				E	6	24	24	
63.	SDM86	DSI	DC,DI	Ethics and academic integrity	2				E	6							24	24	
64.				Hours per week / number of verification procedures / ECTS	2				1e	6	8				3e+1c	24	120	120	
65.				MODULE 9 –Differential equations															
66.	SDM91	DSP	DI	Partial differential equations	2				E	6							24	24	
67.	SDM92	DSP	DI	Maximum principles and their applications	2				E	6							24	24	
68.	SDM93	DSI	DC,DO	Methodology of scientific research	2				C	6							24	24	
69.	SDM94	DSP	DO	Functional Analysis															
70.	SDM95	DSP	DI	Evolution Equations in Hilbert Spaces	2				E								24	24	
71.	SDM96	DSI	DC,DI	Ethics and academic integrity	2				E	6							24	24	
72.				Hours per week / number of verification procedures / ECTS	10				4e+1c	30							120	120	

LEGENDA: *C1 = the criterion of contents: DSP – speciality course, DSI – synthesis course, DCA – fundamental course. **C2 = the criterion of binding: DI – mandatory course, DO – optional (non-mandatory) course; DC – complementary course, C – lecture, S – seminar, L – laboratory, P – project, CR – ECTS, FV – verification procedure, Ex – exam, C – colloquium.

Note. The students will select 4 mandatory courses, among them being “Ethics and academic integrity” and 1 optional (non-mandatory) course.

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PROGRAMME OF SCIENTIFIC RESEARCH

	Nr.	Finalizare	ECTS
Project of scientific research	1	Colloquium	30
Report of scientific research defended in front of the PhD supervisor and Comission	3	Colloquium	20/report
Participation at conferences, PhD thesis presentations, conferences of invited speakers (non-mandatory)		Certificate of participation	2/participation
Scientific papers related to the research activity in the scientific research programme	1	At least accepted for publication	30/paper
ECTS (partial)			150
ECTS (total)			180



5. SPECIFIC CONSTRAINTS FOR ACCESS / ADMISSION, PROMOTION, EQUIVALENCE OF UNIVERSITY ADVANCED STUDIES PROGRAMME, etc.

The promotion of PhD students on the Programme of Scientific Research is made upon acceptance of the Project of scientific research defended in front of the PhD supervisor and Comission. The equivalence of University Advanced Studies programme followed in a different institution is made upon the analysis of the corresponding teaching plan and is approved by the Council of the Doctoral School of Mathematics.

6. DEFENDING THE PhD THESIS

This is made according to „Regulamentul de finalizare a studiilor universitare de doctorat”, articles 28, 29, 30.

7. POSSIBILITIES TO CONTINUE THE PhD STUDIES

By postdoc studies in the same institution or a different one.

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