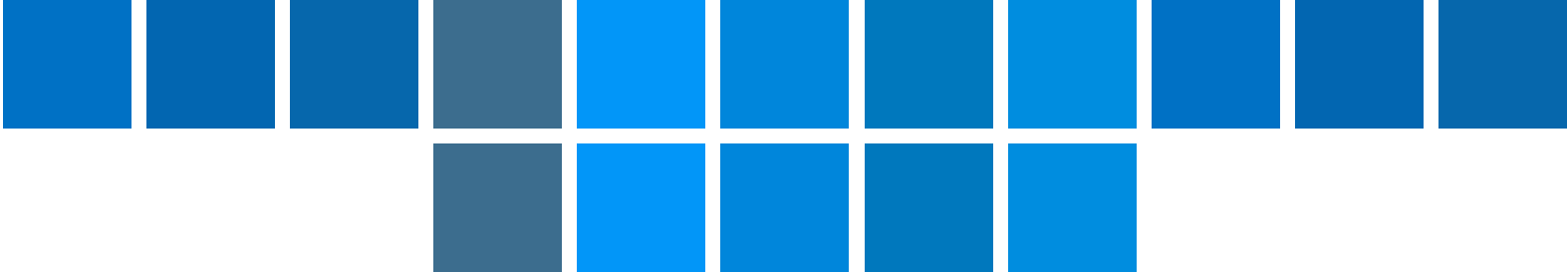




UNIVERSITÀ
DEGLI STUDI
DI TORINO

100762

COURSES BROCHURE

A decorative graphic consisting of two rows of blue squares. The top row has 11 squares of varying shades of blue. The bottom row has 5 squares, also of varying shades of blue, positioned below the top row.

PhD Programme in Complex Systems for Life Sciences (until 35th
cycle)

Alumni Day

Academic year:	2020/2021
Course ID:	
Teacher:	
Teacher contacts:	
Year:	1st year 2nd year 3rd year
Type:	NA
Credits/recognition:	0.5
Course SSD (disciplinary sector):	BIO/11 - biologia molecolare
Delivery:	na
Language:	English
Attendance:	NA
Type of examination:	

COURSE OBJECTIVES

This workshop is intended to reunite the Alumni of the PhD Programme in Complex Systems for Quantitative Biomedicine, to retrace individual professional experiences and to rediscover a common identity. This PhD Programme was founded in 2003, when the Human Genome Project was about completion and when it became clear that the modern approach to living things will require the systematic description of all components. Genomes, proteomes, cell parts, cell communities and up to the organisms, together with the networks of dynamic interaction between the components, will constitute the scenery for modern biology and medicine. Complex Systems are systems where the collective behavior of their parts entails emergence of properties that can hardly, if not at all, be inferred from properties of the parts. The physics of complex systems and mathematical modelling are essential cultural tools for understanding biological systems. Consequently, we set interdisciplinarity as a pivotal feature of this PhD programme, not only by accepting students with various backgrounds, but also by implementing cross-disciplinary education.

During last 15 years, the Systems Biology approach has led to tremendous advances in Biology and Medicine, allowing on the one hand previously unimaginable levels of understanding and modeling biological phenomena; on the other hand, giving rise to completely new wide-screen technologies that are the basis of personalized medicine.

The workshop is part of the PhD Seminars series. Five Alumni will report their professional and scientific histories. Today's Students will present their work on Posters and discuss their projects with the Speakers and the other Alumni participating in this event.

PROGRAM

[Click here to get the flyer](#)

((^Morning Session - Chairman: prof. Enzo Medico))

9.30 -9.45: opening morning session

9.45 - 10.15: Lorenza Alice d'Alessandro, team leader DFKZ German Cancer Research Center

10.15 - 10.45: Giorgio Seano, PI Institut Curie Research Centre

11.00 - 13.00: roundtables

((^Afternoon Session - Chairman: prof. Michele Caselle))

14.00 - 14.30: Andrea Picco, maitre assistant University of Geneva

14.30 - 15.00: Lorenzo Argante, data scientist GSK Siena

15.00 - 15.15: closing afternoon session

Course webpage: https://dott-scsv-en.campusnet.unito.it/do/corsi.pl/Show?_id=p6lz

Cell Biology and Physiopathology

Academic year:	2020/2021
Course ID:	
Teacher:	Prof. Federico Bussolino Prof. Dario Roccatello Prof. Luca Primo Prof. Alberto Puliafito Prof. Guido Serini Prof. Enrico Giraudo Prof. Alessandra Fiorio Pla Prof. Luca Munaron
Teacher contacts:	0119933347, federico.bussolino@unito.it
Year:	1st year 2nd year 3rd year
Type:	NA
Credits/recognition:	10
Course SSD (disciplinary sector):	BIO/09 - fisiologia BIO/10 - biochimica BIO/12 - biochimica clinica e biologia molecolare clinica MED/14 - nefrologia
Delivery:	na
Language:	English
Attendance:	NA
Type of examination:	

PROGRAM

((^Webinars cycle organized by the Oncology Department
January 2021- April 2021))

Held in Italian - frequency is suggested but not mandatory

Wednesday 20/01 at 16.30

La comunicazione dei risultati della ricerca (Giuseppe Tipaldo)

Webex Link: [here](#)

Wednesday 17/02 at 16.30

Realtà virtuale/aumentata e intelligenza artificiale in medicina (Pietro Piazzolla & Gabriella Balestra)

Webex Link: [here](#)

Wednesday 17/03 at 16.30

Il metabolismo del cancro (Paola Chiarugi & Stefano Indraccolo)

Webex link: [here](#)

Wednesday 21/04 at 16.30

Il microbiota (Maria Rescigno & Lisa Derosa)

Webex link: [here](#)

((^UNITO-POLITO Conference Series in Cancer - Nanoscience in Cancer Immunotherapy
March 9th - 11th 2021))

The Nanoscience in Cancer Immunotherapy Workshop (NCIW), to be held in Turin from March 9-11

2021, is an international meeting jointly organized by the Università and Politecnico of Turin with the aim to provide a platform for discussion on the most recent advances in tumor immunology with a focus on nano bio-technology as a strategy to foster the impact of immunotherapy on cancer treatment.

Program Link

SUGGESTED TEXTBOOKS AND READINGS

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Course webpage: https://dott-scsv-en.campusnet.unito.it/do/corsi.pl/Show?_id=h804

Data analysis, AI and machine learning

Academic year:	2020/2021
Course ID:	
Teacher:	Prof. Elisa Ficarra (Lecturer)
Teacher contacts:	elisa.ficarra@polito.it
Year:	1st year 2nd year 3rd year
Type:	NA
Credits/recognition:	0.5
Course SSD (disciplinary sector):	ING-INF/05 - sistemi di elaborazione delle informazioni
Delivery:	na
Language:	English
Attendance:	NA
Type of examination:	

PROGRAM

Updates are coming soon

Link for the programme of the a.y. 2019-2020: here

((^Cancer Data Integration organized by Prof. Ficarra
Coming Soon))

Coming Soon

((.))

Course webpage: https://dott-scsv-en.campusnet.unito.it/do/corsi.pl/Show?_id=ypgi

Genomics and complexity in medicine

Academic year:	2020/2021
Course ID:	
Teacher:	Prof. Michele De Bortoli Prof. Salvatore Oliviero Prof. Raffaele Adolfo Calogero Prof.ssa Francesca Cordero
Teacher contacts:	0116705058, michele.debortoli@unito.it
Year:	1st year 2nd year 3rd year
Type:	NA
Credits/recognition:	3
Course SSD (disciplinary sector):	BIO/11 - biologia molecolare INF/01 - informatica
Delivery:	na
Language:	English
Attendance:	NA
Type of examination:	

PROGRAM

((^Webinar held by Proff. Pelizzola and Zavolan
21 June 2021))

21 June 2021 - 2 PM to 4:30 PM (Webex link: [here](#))

"Dynamics of transcriptional regulation" by Mattia Pelizzola, PhD;
"Regulation of gene expression in cancers" by Mihaela Zavolan, MD PhD

((^Webinar held by Proff. Incarnato and Bidaut
22 June 2021))

22 June - 2 PM to 4:30 PM (Webex Link: [here](#))

"Multi-Omics and gene networks integration in cancerology" by Ghislain Bidaut, PhD;
"From "static" to dynamic RNA structures in the SARS-CoV-2 genome" by Danny Incarnato,
PhD

((Tips and tricks on single cell technology - Vladimir Benes
1 July 2021))

1 July 2021 - 2 PM to 4 PM (Video registration: [here](#); Slides: [here](#))

"Tips and tricks on single cell technology" by Vladimir Benes, director EMBL core lab in
Heidelberg

((^Chasing reproducibility in single cell data analysis - Prof. Calogero
5 July 2021))

5 July 2021 - 2 PM to 3:40 PM (Video registration: [here](#))

"Chasing reproducibility in single cell data analysis" by prof. Raffaele Calogero

((Dissecting the colorectal cancer transcriptome: a cancer cell-intrinsic program orchestrates fibroblasts driving tumor aggressiveness - Claudio Isella
16 July 2021))

16 July 2021 (Video registration: [here](#))

"Dissecting the colorectal cancer transcriptome: a cancer cell-intrinsic program orchestrates fibroblasts driving tumor aggressiveness" by Dr. Claudio Isella, Faculty member

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SUGGESTED TEXTBOOKS AND READINGS

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Course webpage: https://dott-scsv-en.campusnet.unito.it/do/corsi.pl/Show?_id=g9ge

Introduction to Biochemistry

Academic year:	2019/2020
Course ID:	
Teacher:	Prof. Federico Bussolino (Lecturer)
Teacher contacts:	0119933347, federico.bussolino@unito.it
Year:	1st year
Type:	NA
Credits/recognition:	2
Course SSD (disciplinary sector):	BIO/10 - biochimica
Delivery:	na
Language:	English
Attendance:	NA
Type of examination:	

Course webpage: https://dott-scsv-en.campusnet.unito.it/do/corsi.pl/Show?_id=q7xn

Introduction to Bioinformatics

Academic year:	2019/2020
Course ID:	
Teacher:	Prof. Raffaele Adolfo Calogero Prof. Marco Botta
Teacher contacts:	+390116706454, raffaele.calogero@unito.it
Year:	
Type:	NA
Credits/recognition:	4.5
Course SSD (disciplinary sector):	BIO/11 - biologia molecolare INF/01 - informatica
Delivery:	na
Language:	English
Attendance:	NA
Type of examination:	

Course webpage: https://dott-scsv-en.campusnet.unito.it/do/corsi.pl/Show?_id=2dvx

Introduction to Cell Biology

Academic year:	2019/2020
Course ID:	
Teacher:	Prof. Saverio Francesco Retta (Lecturer)
Teacher contacts:	011.6706426, francesco.retta@unito.it
Year:	1st year
Type:	NA
Credits/recognition:	1
Course SSD (disciplinary sector):	BIO/13 - biologia applicata
Delivery:	na
Language:	English
Attendance:	NA
Type of examination:	

Course webpage: https://dott-scsv-en.campusnet.unito.it/do/corsi.pl/Show?_id=gTlf

Introduction to Cell Physiology

Academic year:	2019/2020
Course ID:	
Teacher:	Prof. Luca Munaron (Lecturer) Prof. Alessandra Fiorio Pla (Lecturer)
Teacher contacts:	0116704667, luca.munaron@unito.it
Year:	1st year
Type:	NA
Credits/recognition:	1
Course SSD (disciplinary sector):	BIO/09 - fisiologia
Delivery:	na
Language:	English
Attendance:	NA
Type of examination:	

Course webpage: https://dott-scsv-en.campusnet.unito.it/do/corsi.pl/Show?_id=ad5l

Introduction to Molecular Biology

Academic year:	2019/2020
Course ID:	
Teacher:	Enzo Medico (Lecturer)
Teacher contacts:	011-9933234, enzo.medico@unito.it
Year:	1st year
Type:	NA
Credits/recognition:	1.5
Course SSD (disciplinary sector):	BIO/17 - istologia
Delivery:	na
Language:	English
Attendance:	NA
Type of examination:	

Course webpage: https://dott-scsv-en.campusnet.unito.it/do/corsi.pl/Show?_id=qnv5

Journal Club

Academic year:	2020/2021
Course ID:	
Teacher:	Prof. Ferdinando Di Cunto Enzo Medico Prof. Dario Sangiolo
Teacher contacts:	0116706616 / 0116706409, ferdinando.dicunto@unito.it
Year:	1st year 2nd year 3rd year
Type:	NA
Credits/recognition:	5
Course SSD (disciplinary sector):	BIO/11 - biologia molecolare BIO/17 - istologia MED/06 - oncologia medica
Delivery:	na
Language:	English
Attendance:	NA
Type of examination:	

PROGRAM

Organized by II year students (35th cycle) and mandatory as part of the Characterizing activities of our Program.

The journal clubs will be in form of webinar.

((06.05.2021 h 17-19))

Date: 06.05.2021 h 17-19

Students presenting: Marta Biondo - Giuseppe Rospo

Title: "Digitaldsorter: Deep-Learning on scRNA-Seq to Deconvolute Gene Expression Data"

Referenze paper: Torroja, C., & Sanchez-Cabo, F. (2019). Digitaldsorter: deep-learning on scRNA-Seq to deconvolute gene expression data. *Frontiers in genetics*, 10, 978.

Info webex: [Here](#)

((13.05.2021 h 17-19))

Date: 13.05.2021 h 17-19

Students presenting: Marco Cortese - Flavia Martino

Title: "Chemotherapy induces dynamic immune responses in breast cancers that impact treatment outcome"

Paper reference: Park, Y. H., Lal, S., Lee, J. E., Choi, Y. L., Wen, J., Ram, S., ... & Kan, Z. (2020). Chemotherapy induces dynamic immune responses in breast cancers that impact treatment outcome. *Nature communications*, 11(1), 1-14.

Info webex: [Here](#)

((20.05.2021 h 17-19))

Date: 20.05.2021 h 17-19

Students presenting: Valentina Russo - Zunaira Munir

Title: "Genome-wide programmable transcriptional memory by CRISPR-based epigenome editing"

Paper reference: Nuñez, J. K., Chen, J., Pommier, G. C., Cogan, J. Z., Replogle, J. M., Adriaens, C., ... & Weissman, J. S. (2021). Genome-wide programmable transcriptional memory by CRISPR-based epigenome editing. *Cell*.

Info webex: [Here](#)

((03.06.2021 h 17-19))

Date: 03.06.2021 h 17-19

Students presenting: Irene Cecchi - Madelaine Audero

Title: Systems analysis of intracellular pH vulnerabilities for cancer therapy

Paper reference: Persi, E., Duran-Frigola, M., Damaghi, M., Roush, W. R., Aloy, P., Cleveland, J. L., ... & Ruppin, E. (2018). Systems analysis of intracellular pH vulnerabilities for cancer therapy. *Nature communications*, 9(1), 1-11.

Info webex: [Here](#)

((10.06.2021 h 17-19))

Date: 10.06.2021 h 17-19

Students presenting: Dario Cardamone - Filippo Valle

Title: Reconstructing cell cycle and disease progression using deep learning

Paper reference: Eulenberg, P., Köhler, N., Blasi, T., Filby, A., Carpenter, A. E., Rees, P., ... & Wolf, F. A. (2017). Reconstructing cell cycle and disease progression using deep learning. *Nature communications*, 8(1), 1-6.

Info webex: [Here](#)

((17.06.2021 h 17-19))

Date: 17.06.2021 h 17-19

Students presenting: Carina Cojocaru - Vladimir Nosi

Title: CLK1/SRSF5 pathway induces aberrant exon skipping of METTL14 and Cyclin L2 and promotes growth and metastasis of pancreatic cancer

Paper reference: Chen, S., Yang, C., Wang, Z. W., Hu, J. F., Pan, J. J., Liao, C. Y., ... & Wang, Y. D. (2021). CLK1/SRSF5 pathway induces aberrant exon skipping of METTL14 and Cyclin L2 and promotes growth and metastasis of pancreatic cancer. *Journal of Hematology & Oncology*, 14(1), 1-24.

Info webex: [Here](#)

((02.07.2021 h 17-19))

Date: 02.07.2021 h 17-19

Students presenting: Eirini Chrysanthou - Emir Sehovic

Title: A high-throughput screen of real-time ATP levels in individual cells reveals mechanisms of energy failure

Paper reference: Mendelsohn, B. A., Bennett, N. K., Darch, M. A., Yu, K., Nguyen, M. K., Pucciarelli, D., ... & Nakamura, K. (2018). A high-throughput screen of real-time ATP levels in individual cells reveals mechanisms of energy failure. *PLoS biology*, 16(8), e2004624.

Info webex: [Here](#)

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Course webpage: https://dott-scsv-en.campusnet.unito.it/do/corsi.pl/Show?_id=iiag

Mathematical and numerical methods for Life Sciences

Academic year:	2019/2020
Course ID:	
Teacher:	Prof. Andras Horvath (Lecturer)
Teacher contacts:	+39-011-6706803, andras.horvath@unito.it
Year:	
Type:	NA
Credits/recognition:	1.5
Course SSD (disciplinary sector):	INF/01 - informatica
Delivery:	na
Language:	English
Attendance:	NA
Type of examination:	

Course webpage: https://dott-scsv-en.campusnet.unito.it/do/corsi.pl/Show?_id=zqsm

Statistical Inference and Machine Learning

Academic year:	2019/2020
Course ID:	
Teacher:	Prof. Michele Caselle Dott.ssa Tiziana Sanavia
Teacher contacts:	011 6707205, michele.caselle@unito.it
Year:	1st year
Type:	NA
Credits/recognition:	1
Course SSD (disciplinary sector):	FIS/02 - fisica teorica, modelli e metodi matematici
Delivery:	na
Language:	English
Attendance:	NA
Type of examination:	

SUPPORT ACTIVITIES

On the Moodle UniTo platform:

<https://elearning.unito.it/dottorato/enrol/index.php?id=17>

PROGRAM

The course is organized in four modules for a total of 8 hours

Each module is composed by a set of video-registered lectures and an online Q&A session.

The video-registered lectures for the first two modules will be available at the end of may and will be followed by an online Q&A session.

The lectures for the last two modules will be available in the first week of june and again will be followed by an online Q&A session

Module 1: Introduction to Statistical Inference and Regression Models

Module 2: Likelihoods and Bayesian inference

Module 3: Introduction to Neural Networks

Module 4: Resampling methods

Course webpage: https://dott-scsv-en.campusnet.unito.it/do/corsi.pl/Show?_id=55sd

System Biology

Academic year:	2019/2020
Course ID:	
Teacher:	Prof. Michele Caselle (Lecturer)
Teacher contacts:	011 6707205, michele.caselle@unito.it
Year:	1st year
Type:	NA
Credits/recognition:	1
Course SSD (disciplinary sector):	FIS/02 - fisica teorica, modelli e metodi matematici
Delivery:	na
Language:	English
Attendance:	NA
Type of examination:	

SUPPORT ACTIVITIES

course on Moodle: <https://elearning.unito.it/dottorato/course/view.php?id=16>

PROGRAM

The course is organized in three modules for a total of 8 hours.

Each module is composed by a set of video-registered lectures and there will be an online session for questions and comments at the end of the course.

The video-registered lectures are available at following links

and will be followed by an online Q&A session at 11 of June at 15:00 (Webex room link).

Module 1: Introduction to Systems Biology: video-lessons

Module 2: Introduction to the theory of Complex Networks and its use in Computational Biology: video-lessons

Module 3: Introduction to information theory and its use in Computational Biology: will be presented during Q&A - thursday 11 June 15:00 (Webex room link)

Course webpage: https://dott-scsv-en.campusnet.unito.it/do/corsi.pl/Show?_id=kxec

Zeroing courses

Academic year:	2019/2020
Course ID:	
Teacher:	
Teacher contacts:	
Year:	1st year
Type:	NA
Credits/recognition:	13.5
Course SSD (disciplinary sector):	BIO/09 - fisiologia BIO/10 - biochimica BIO/11 - biologia molecolare BIO/13 - biologia applicata BIO/17 - istologia FIS/01 - fisica sperimentale INF/01 - informatica
Delivery:	na
Language:	English
Attendance:	NA
Type of examination:	

Course modules:

- Introduction to Biochemistry
- Introduction to Bioinformatics
- Introduction to Cell Biology
- Introduction to Cell Physiology
- Introduction to Molecular Biology
- Mathematical and numerical methods for Life Sciences
- Statistical Inference and Machine Learning
- System Biology

Course webpage: https://dott-scsv-en.campusnet.unito.it/do/corsi.pl/Show?_id=wfmk

Introduction to Biochemistry

Academic year:	2019/2020
Course ID:	
Teacher:	Prof. Federico Bussolino (Lecturer)
Teacher contacts:	0119933347, federico.bussolino@unito.it
Year:	1st year
Type:	NA
Credits/recognition:	2
Course SSD (disciplinary sector):	BIO/10 - biochimica
Delivery:	na
Language:	English
Attendance:	NA

Type of examination:	
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Course webpage: https://dott-scsv-en.campusnet.unito.it/do/corsi.pl/Show?_id=q7xn

Introduction to Bioinformatics

Academic year:	2019/2020
Course ID:	
Teacher:	Prof. Raffaele Adolfo Calogero Prof. Marco Botta
Teacher contacts:	+390116706454, raffaele.calogero@unito.it
Year:	
Type:	NA
Credits/recognition:	4.5
Course SSD (disciplinary sector):	BIO/11 - biologia molecolare INF/01 - informatica
Delivery:	na
Language:	English
Attendance:	NA
Type of examination:	

Course webpage: https://dott-scsv-en.campusnet.unito.it/do/corsi.pl/Show?_id=2dvx

Introduction to Cell Biology

Academic year:	2019/2020
Course ID:	
Teacher:	Prof. Saverio Francesco Retta (Lecturer)
Teacher contacts:	011.6706426, francesco.retta@unito.it
Year:	1st year
Type:	NA
Credits/recognition:	1
Course SSD (disciplinary sector):	BIO/13 - biologia applicata
Delivery:	na
Language:	English
Attendance:	NA
Type of examination:	

Course webpage: https://dott-scsv-en.campusnet.unito.it/do/corsi.pl/Show?_id=gTlf

Introduction to Cell Physiology

Academic year:	2019/2020
Course ID:	
Teacher:	Prof. Luca Munaron (Lecturer) Prof. Alessandra Fiorio Pla (Lecturer)
Teacher contacts:	0116704667, luca.munaron@unito.it
Year:	1st year
Type:	NA
Credits/recognition:	1
Course SSD (disciplinary sector):	BIO/09 - fisiologia
Delivery:	na
Language:	English
Attendance:	NA
Type of examination:	

Course webpage: https://dott-scsv-en.campusnet.unito.it/do/corsi.pl/Show?_id=ad5l

Introduction to Molecular Biology

Academic year:	2019/2020
Course ID:	
Teacher:	Enzo Medico (Lecturer)
Teacher contacts:	011-9933234, enzo.medico@unito.it
Year:	1st year
Type:	NA
Credits/recognition:	1.5
Course SSD (disciplinary sector):	BIO/17 - istologia
Delivery:	na
Language:	English
Attendance:	NA
Type of examination:	

Course webpage: https://dott-scsv-en.campusnet.unito.it/do/corsi.pl/Show?_id=qnv5

Mathematical and numerical methods for Life Sciences

Academic year:	2019/2020
Course ID:	
Teacher:	Prof. Andras Horvath (Lecturer)
Teacher contacts:	+39-011-6706803, andras.horvath@unito.it
Year:	
Type:	NA
Credits/recognition:	1.5
Course SSD (disciplinary sector):	INF/01 - informatica
Delivery:	na
Language:	English
Attendance:	NA
Type of examination:	

Course webpage: https://dott-scsv-en.campusnet.unito.it/do/corsi.pl/Show?_id=zqsm

Statistical Inference and Machine Learning

Academic year:	2019/2020
Course ID:	
Teacher:	Prof. Michele Caselle Dott.ssa Tiziana Sanavia
Teacher contacts:	011 6707205, michele.caselle@unito.it
Year:	1st year
Type:	NA
Credits/recognition:	1
Course SSD (disciplinary sector):	FIS/02 - fisica teorica, modelli e metodi matematici
Delivery:	na
Language:	English
Attendance:	NA
Type of examination:	

SUPPORT ACTIVITIES

On the Moodle UniTo platform:

<https://elearning.unito.it/dottorato/enrol/index.php?id=17>

PROGRAM

The course is organized in four modules for a total of 8 hours

Each module is composed by a set of video-registered lectures and an online Q&A session.

The video-registered lectures for the first two modules will be available at the end of may and will be followed by an online Q&A session.

The lectures for the last two modules will be available in the first week of june and again will be followed by an online Q&A session

Module 1: Introduction to Statistical Inference and Regression Models

Module 2: Likelihoods and Bayesian inference

Module 3: Introduction to Neural Networks

Module 4: Resampling methods

Course webpage: https://dott-scsv-en.campusnet.unito.it/do/corsi.pl/Show?_id=55sd

System Biology

Academic year:	2019/2020
Course ID:	
Teacher:	Prof. Michele Caselle (Lecturer)
Teacher contacts:	011 6707205, michele.caselle@unito.it
Year:	1st year
Type:	NA
Credits/recognition:	1
Course SSD (disciplinary sector):	FIS/02 - fisica teorica, modelli e metodi matematici
Delivery:	na
Language:	English
Attendance:	NA
Type of examination:	

SUPPORT ACTIVITIES

course on Moodle: <https://elearning.unito.it/dottorato/course/view.php?id=16>

PROGRAM

The course is organized in three modules for a total of 8 hours.

Each module is composed by a set of video-registered lectures and there will be an online session for questions and comments at the end of the course.

The video-registered lectures are available at following links

and will be followed by an online Q&A session at 11 of June at 15:00 (Webex room link).

Module 1: Introduction to Systems Biology: video-lessons

Module 2: Introduction to the theory of Complex Networks and its use in Computational Biology: video-lessons

Module 3: Introduction to information theory and its use in Computational Biology: will be presented during Q&A - thursday 11 June 15:00 (Webex room link)

Course webpage: https://dott-scsv-en.campusnet.unito.it/do/corsi.pl/Show?_id=kxec

