Graduate School of Engineering and Natural Sciences

Biomedical Engineering and Bioinformatics
- PhD
- MS (With Thesis)
- MS (Without Thesis)

Electrical-Electronics Engineering and Cyber Systems
- PhD
- MS (With Thesis)
- MS (Without Thesis)

Healthcare Systems Engineering
- PhD
- MS (With Thesis)

Climate Change, Energy and Health
- (30% English)
- MS (With Thesis)

İnşaat Yönetimi ve Hukuku
- PhD
- MS (With Thesis)
- MS (Without Thesis)

Yapılı Çevre ve Sağlık
- MS (Without Thesis)

Civil Engineering
- (30% English)
- PhD
- MS (With Thesis)

sens.medipol.edu.tr
Management Organization

Assoc. Prof. Yasemin YUKSEL DURMAZ, Director of GSENS

Erol AKCAY
Secretary of GSENS

Hasan DUMAN
Secretary of GSENS
Problem Solving Organization

Advisor

Hasan DUMAN

Erol AKCAY

Assoc. Prof. Yasemin YUKSEL DURMAZ, Director of GSENS
First visit “sens.medipol.edu.tr”

- Courses
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- Guideline for thesis
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- Program details
- Course schedule
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- Application to Take Thesis Defense Exam
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- Selection of Courses and Committee Member
- Exam Result
- Oral PhD Qualifying Exam Result
- Thesis Advisor Selection
- Thesis Exam Committee and Defense Date
- Thesis Plagiarism Report
- Thesis Submission Form
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- Thesis Topic Selection Form
- Written PhD Qualifying Exam Result

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- Registration Delete Letter
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- Color Code for the Thesis Cover Background
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Getting into GSENS

ONLINE Application

Master Application
Diploma (GPA)
ALES (55 for National)
YOKDIL(55)-TOEFL(66)-PE (60/100)

Interview

Evaluation for National
GPA (%20)
ALES (%50)
Interview (30)

Evaluation for International
GPA (%50)
Interview (%50)

Final Registration with original copy of the documents

PhD Application
Diploma (GPA)
ALES (55 for National)
TOEFL(66) (compulsory)

PhD Application without MS
Diploma (GPA min 3.00/4.00 or top three in the class)
ALES (80 for national)
YDS-YOKDIL(55)-TOEFL(66) (compulsory)
<table>
<thead>
<tr>
<th>Event</th>
<th>Fall Semester Dates</th>
<th>Spring Semester Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning - End of Online Application for Fall Semester</td>
<td>October 5, 2020 - May 27, 2020</td>
<td>February 22, 2021 - November 22, 2020</td>
</tr>
<tr>
<td>English Exam for Master Applicants</td>
<td>September 3, 2020</td>
<td>January 4, 2021</td>
</tr>
<tr>
<td>Interview of all Applicants</td>
<td>September 4, 2020</td>
<td>January 7, 2021</td>
</tr>
<tr>
<td>Announcement of Accepted Graduate Students for Fall Semester</td>
<td>September 8, 2020</td>
<td>January 12, 2021</td>
</tr>
<tr>
<td>Final Registration for New Graduate Students</td>
<td>September 21 - October 12, 2020</td>
<td>February 8 - March 1, 2021</td>
</tr>
<tr>
<td>Fall Semester Course Selection</td>
<td>September 28 - October 10, 2020</td>
<td>February 17 - 27, 2021</td>
</tr>
<tr>
<td>Fall Semester Add-Drop Term</td>
<td>October 11 - November 1, 2020</td>
<td>Spring Semester Dates</td>
</tr>
<tr>
<td>Fall Semester - Midterms</td>
<td>November 21-29, 2020</td>
<td></td>
</tr>
<tr>
<td>Fall Semester - Make up Exam Term</td>
<td>December 15-20, 2020</td>
<td></td>
</tr>
<tr>
<td>Fall Semester - Final Exams</td>
<td>January 20-31, 2021</td>
<td></td>
</tr>
<tr>
<td>Thesis Submission Deadline for Fall Semester</td>
<td>January 15, 2021</td>
<td></td>
</tr>
<tr>
<td>Fall Semester Qualifying Exam - Written Part</td>
<td>January 21, 2021</td>
<td></td>
</tr>
<tr>
<td>Fall Semester Qualifying Exam - Oral Part</td>
<td>January 25-29, 2021</td>
<td></td>
</tr>
<tr>
<td>Commencement</td>
<td>will be announced.</td>
<td></td>
</tr>
</tbody>
</table>
Each Semester

- Course selection with approval of your advisor.
- BAP application.
- Completion of BAP document based on % fellowship.
  - All first semester students are fully supported, but they still need to apply for BAP and deliver proper document to accounting department.
### Minimum Course Requirement

- Graduate Seminar
- Scientific Research Techniques and Ethics
- 7 technical courses (21 credits)

Minimum ECTS Requirement: 120 (7+2) courses 60 ECTS + Thesis 60 ECTS

### PhD

#### With MS Degree

- Graduate Seminar
- Scientific Research Techniques and Ethics*
- 7 technical course (21 credits)

**ECTS:** 60

- Qualifier
- Thesis
- Guided Research

**Minimum ECTS Requirement:** 240

#### Without MS Degree

- Graduate Seminar
- Scientific Research Techniques and Ethics
- 14 technical courses (42 credits)
- Qualifier
- Thesis
- Guided Research

**ECTS:** 120

**Minimum ECTS Requirement:** 300

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*Course load must be completed within 4 semesters, otherwise your studentship will be ended.

Missing ECTS can be complete with "Guided Research I and II".

Students CAN transfer maximum half of the required course credits. This means max GSENS accepts your 3 courses

*If it hasn’t taken before
Courses

- List of the course can be found at sens.medipol.edu.tr
- MS student can take max of 2 undergraduate course if they haven’t taken before
- However PhD student cannot take the undergraduate courses
- MS and PhD student can take max of 2 course from different graduate schools (PhD without MS can take max of 4 course)
- PhD student can take max of 2 MS courses
- MS student can take both MS and PhD courses. However their PhD courses that they took during their MS won’t be count as course load for PhD if they continue to PhD program
Program Durations

<table>
<thead>
<tr>
<th></th>
<th>Master</th>
<th>PhD</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>With MS</td>
</tr>
<tr>
<td>Min. Time (semester)</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>Max. Time (semester)</td>
<td>6</td>
<td>12</td>
</tr>
</tbody>
</table>

- End of the maximum time, who could not complete the program requirement, their studentship will be terminated.

- Maximum time to complete MS courses is 4 semester.

- Maximum time to complete PhD courses is 4 semester for PHD with MS and 6 semester PhD without MS.

- Early graduation is possible from MS program (end of 3\textsuperscript{rd} semester), however requires solid success.
Advisor

- Advisor needs to be assigned for all grad students until the end of the first semester.
- Thesis topic should be determined latest by the end of the second semester.
- We expect everyone to assign advisor and determine thesis topic by the end of first semester. Then, students have to register thesis after their advisor has assigned.
  - Form need to be filled. Thesis advisor and Topic selection
- If the thesis study requires more than one advisor second advisor can be either form our university or another university.
Finalizing Thesis and Graduation (MS)

- **Start planning your defense with your advisor 2 months** prior to your expected graduation (defense) day. Be careful about thesis submission deadlines.

- Obtained results should be **written as a thesis** by following the rule the GSENS defined.

- Completed thesis should be **submitted to advisor** for his/her review. Please provide your advisor time for review like **minimum 2 weeks** before thesis submission.

- **Advisors approves and submits thesis to GSENS along with all required information** for thesis defense like committee members, defense date and time etc...

- Forms need to be filled;
  - Thesis submission form.
  - Application to take thesis defense exam.
  - Thesis exam committee and defense day.
  - Thesis plagiarism report form

- **GSENS creates the originality report** and sends it along with thesis to advisor and other committee members. **This takes 3-4 weeks.**
  - Once it is delivered to your thesis committee you have a month to defend it.
Defense Exam (MS)

- Defense committee;
  - 3 committee member including student’s advisor.
  - 1 committee member should be from another university
  - Co-advisor can join the exam.

- Exam results should be reported to GSENS within 3 days.
  - Forms need to be filled.
    - Exam result form.
      - sens.medipol.edu.tr/forms/
There are 3 possible results:

- Accepted
- Rejected
- Correction

Follow the procedure for diploma

Your studentship will be terminated.

Max. 3 months for correction

Re-defense
Diploma (MS)

- Within **one month** corrected and formatted thesis (2 hard copies containing complete signature of all committee members and result page of the originality report and 1 CD as electronic copy) must be submitted to GSENS. **STUDENT`S ADVISOR SHOULD REVIEW THE THESIS ONE MORE TIME BEFORE PREPARING HARD COPIES.**

- There is certain color and format for thesis cover and all thesis have to follow this rule.

- Graduation date will be the defense date.

- If necessary student can request 1 more month to complete this process.
  - However after this point, if thesis wont be submitted, student will be passive student and wont be able to use any right of being student. *(Immigration office and army for native students)*
  - End of the max. time for master program, studentship will be terminated.
M. Mutlu

The thesis is titled

2017

Page dimensions: 720.0 × 540.0

Page margins: top & bottom: 3 cm, left & right: 2.5 cm

Paper Type: A4 Times New Roman-12 p. Logo size: 4 cm height, 10.72 cm width

Top to bottom: 3rd cm logo, 11th cm thesis title, 15th cm thesis type and name, 21st cm institute and program, 24th cm date.

Please delete this note before printing.

Graduate School of Engineering and Natural Sciences

Name of Graduate Program

Month, Year of defense
ISTANBUL MEDIPOL UNIVERSITY
GRADUATE SCHOOL OF ENGINEERING AND NATURAL SCIENCES
PROCEDURES TO BE MADE AFTER THE THESIS DEFENSE

1. Students who are accepted as successful in the thesis defense exam have to fill the Thesis Data Entry Form online electronically after entering the system (https://tez.yok.gov.tr/UlusalTezMerkezi/sistemGiris.jsp) with their own E-Government password. Then, Thesis Data Entry Form will be delivered to the Institute (GSENS) as hard copy by printing out.

2. Students who are successful in the thesis defense exam and fulfilled the other requirements for graduation, they have to submit two hard copies of the thesis signed by the jury and one CD contains PDF version of the thesis within one month after the date of the thesis defense exam to the Institute (GSENS).

3. The name of the electronic PDF file of the thesis in the CD has to be the same Reference No. generated in the Thesis Data Entry Form.

4. The result page of the TURNITIN Originality Report has to be added to thesis as last page of the thesis. The student’s advisor should check the thesis before preparing the hard copies. The hard copy of the thesis and the PDF version (CD) must be identical. At this point, the thesis even with small differences can be decided as invalid by the Higher Education Council (YOK) system.

5. The students who submit his/her thesis to the Institute (GSENS) and fulfill the other requirements have to submit Registration Delete Form and the Graduation Letter to the Institute as well to be able to complete official graduation process.

6. Graduate thesis;
   a) If the patent application for the graduate thesis or the process of obtaining a patent continues; Two years *Article 6 (1)
   b) Access to thesis might be postponed for a period of six months if the thesis has the information, findings, new techniques, materials and methods, which have not been published or protected through a patent yet. *Article 6 (2)

7. Students who wish to make a request for constraint on their thesis, have to apply to Institute (GSENS) with the Thesis Constraint Letter. This application has to be made during the submission of the Thesis Data Entry Form.

8. Student who do not apply with the Thesis Constraint Letter, their thesis will be available online on the National Thesis Center.

*The directive on the Collection, Regulation and Opening of Graduate Theses in Electronic Environment.
PhD

- Course load should be completed within 4 semester.
- Latest 5th semester PhD students need to take Qualifying exam (without MS-> 7th semester).
- In the 4th semester they can register to QE preparation course along with the course.

QE

- Two times in a year (end of August and beginning of February)
- Register to QE preparation course.
- End of that semester submit the form.
  - Application to take PhD Qualifying Exam

sens.medipol.edu.tr/forms/
Each PhD program sets their QE committee which forms sub committee based on student`s course selection.

Sub-committee organizes the written exam:
- Prepares the written exam question
- Evaluates the written exam question and signs the Q&A sheets
- Committee members do not have to physically be there
- Written exam should be same day for all students

Sub-committee organizes the oral exam:
- If student is successful, same or different sub-committee can make the oral exam
- Committee members have to physically be there
- They make a final decision

Sub-committee contains student`s advisor.
QE for EECS

- QE committee consist of 5 members including advisor (2 members from different universities, 2 from department)

- Written exam:
  - Student prepares a survey paper in their research field
  - 2 weeks before oral exam, student delivers the survey paper to committee members
  - Evaluation of survey paper: Advisor evaluates 60% and committee evaluates 40% of it.
  - 65% success required to take oral exam

- Oral exam:
  - Student makes 30 min presentation of the survey paper to same committee members
  - After presentation, exam will continue as Q&A
QE for BMEB

- QE committee consist of 5 members including advisor (2 members from different universities, 2 from department)

  ➢ Written exam:
  - Student selects two subjects related with the program
    - 6 questions (3Q/course, 2Q/course have to be answer)
    - 65 is required to take oral exam

- Oral exam:
  - Student prepares a survey paper in their research field
  - 2 weeks before oral exam, student delivers the survey paper to committee members
  - Evaluation of survey paper: Advisor evaluates 60% and committee evaluates 40% of it.
  - Survey paper contributes the 40% of the oral exam grade
  - Student makes 30 min presentation of the survey paper to same committee members
  - After presentation, exam will continue as Q&A
# BMEB course pool

<table>
<thead>
<tr>
<th>Courses</th>
<th>Reference Books</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1</strong> Biology</td>
<td>* Molecular biology of THE CELL 5th edition by Bruce Alberts, Alexander Johnson, Julian Lewis, Martin Raff, Keith Roberts, and Peter Walter</td>
</tr>
<tr>
<td></td>
<td>* Medical Cell Biology Third edition edited by Steven R. Goodman</td>
</tr>
<tr>
<td><strong>2</strong> Linear Algebra</td>
<td>* Elementary Linear Algebra by Bernand Kolman and David R. Hill (9th edition)</td>
</tr>
<tr>
<td><strong>3</strong> Circuit Theory</td>
<td>Fundamentals of Electric Circuits by Charles K Alexander, Matthew Sadiku</td>
</tr>
<tr>
<td><strong>4</strong> Biomedical Instrumentation</td>
<td>* Introduction to Biomedical Equipment Technology, Fourth Edition, Joseph J. Carr, John M. Brown</td>
</tr>
<tr>
<td></td>
<td>* Medical Instrumentation, Application and Design, John C. Webster</td>
</tr>
<tr>
<td><strong>7</strong> Biochemistry</td>
<td>Principles of Biochemistry, 5th Edition Moran, Horton, Scrimgeour &amp; Perry</td>
</tr>
<tr>
<td><strong>9</strong> Medical Imaging</td>
<td>Fundamentals of Medical Imaging, Paul Suetens, Cambridge</td>
</tr>
</tbody>
</table>

*Student can select any of 2 course*
# Bioinformatic part

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Structures and Programming Languages</td>
<td>Data Structures and Algorithm Analysis in C++, 2nd edition by Mark Allen Weiss</td>
<td></td>
</tr>
<tr>
<td>Discrete Math</td>
<td>Concrete Mathematics: A foundation for Computer Science, 2nd Edition by Ronald L. Graham and Donald E. Knuth</td>
<td></td>
</tr>
<tr>
<td>Linear Algebra</td>
<td>* Elementary Linear Algebra by Bernand Kolman and David R. Hill (9th edition)</td>
<td></td>
</tr>
<tr>
<td>Machine Learning and Pattern Recognition</td>
<td>Pattern Recognition and Machine Learning by Christopher M. Bishop</td>
<td></td>
</tr>
<tr>
<td>Formal Languages and Automata</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Probability and Statistics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graph Theory and Computer Networks</td>
<td>Graph Theory by Reinhard Diestel</td>
<td></td>
</tr>
<tr>
<td>Computer Networks</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Student can select any of 2 course*
QE

- Results should be given as written document to GSENS within 3 days.
  - Forms need to be filled
    - Written PhD Qualifying Exam Result
    - Oral PhD Qualifying Exam Result
  - Results can be
    - **Pass:** Follow with thesis proposal and supervision
    - **Fail:** 1 more chance for following semester.

sens.medipol.edu.tr/forms/
Thesis Supervision Committee

- After passing QE a thesis supervision committee **will be established within a month.**
- Committee will contain 2 member inside and/or outside of the program.
  - Form need to be filled:
    - Thesis supervision committee
- If co-advisor wishes can join the meetings.

[www.sens.medipol.edu.tr/forms/](www.sens.medipol.edu.tr/forms/)
Thesis Proposal

- After passing QE, **within 6 months** student presents a thesis proposal to thesis committee.
  - Thesis proposal:
    - Scope of work
    - Method
    - Work Plan
- A written document should be submitted to thesis supervision committee members within **15 days before** thesis proposal presentation.
- The result of thesis proposal defense will be submitted to GSENS as a written document within 3 days.
  - Forms need to be filled:
    - Exam Result

www.sens.medipol.edu.tr/forms/
There are 3 possible results:

- **Accepted**
  - Two times in a year (Jan-June, Jul-Dec range) progress should be presented
  - 1 month before meeting written progress report and future plans should be sent to thesis supervision committee.

- **Rejected**
  - New advisor and new thesis topic 6 months
  - Same advisor but new topic 3 months
  - New thesis proposal and defense. If necessary new supervision committee can be established.

- **Correction**
  - 1 month
  - It will be evaluated again as accepted or rejected.
If student doesn’t come to thesis proposal defense without a proper excuse student will be accepted as unsuccessful and proposal will be rejected.

Minimum 3 progress reports should be submitted and presented to thesis supervision committee between acceptance of thesis proposal and PhD dissertation.
Finalizing Thesis and Graduation (PhD)

- Start planning your defense with your advisor 2 months prior to your expected graduation (defense) day. Be careful about thesis submission deadlines.
- Obtained results should be written as a thesis by following the rule the GSENS defined.
- Completed thesis should be submitted to advisor for his/her review. Please provide your advisor time for review like minimum 2 weeks before thesis submission.
- Advisors approves and submits thesis to GSENS along with all required information for thesis defense like committee members, defense date and time etc...
- Forms need to be filled;
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  - Application to take thesis defense exam.
  - Thesis exam committee and defense day.
  - Thesis plagiarism report form
- GSENS creates the originality report and sends it along with thesis to advisor and other committee members. This takes 3-4 weeks.
  - Once it is delivered to your thesis committee you have a month to defend it.
Finalizing Thesis and Graduation (PhD)

- Thesis committee:
  - 3 members should be from thesis supervision committee
  - Minimum 2 members from different university
  - In total 5 members.
- Committee will get together and make defense exam within 1 month after receiving student`s thesis.
There are 3 possible results:

- Accepted
- Rejected
- Correction

Follow the procedure for diploma

Your studentship will be terminated.

Max. 3 months for correction

Re-defense
Diploma (PhD)

- Within **one month** corrected and formatted thesis (**2 hard copies** containing complete signature of all committee members and result page of the originality report and **1 CD** as electronic copy) must be submitted to GSENS. STUDENT’S ADVISOR SHOULD REVIEWED THE THESIS ONE MORE TIME BEFORE PREPARING HARD COPIES.

- There is certain color and format for thesis cover and all thesis have to follow this rule.

- Graduation date will be the date that student submitted his/her thesis to GNENS.

- If necessary, student can request 1 more month to complete this process.
  - However after this point, if thesis won't be submitted, student will be passive student and won't be able to use any right of being student. (Immigration office and army for native students)
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ISTANBUL MEDIPOL UNIVERSITY
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