# AYDIN ADNAN MENDERES UNIVERSITY
# COURSE INFORMATION FORM

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Course Title | | Fracture Mechanics | | | | | | |
| Course Code | | MME521 | | Couse Level | | Second Cycle (Master's Degree) | | |
| ECTS Credit | 8 | Workload | 195 *(Hours)* | Theory | 3 | Practice | 0 | Laboratory | 0 |
| Objectives of the Course | | By teaching students object oriented programming being the most advanced programming way, help students to use it in their studies | | | | | | |
| Course Content | | Character Based Computer Programming(C++, Pascal, ? ), Commands and Variables, Block Structure, Sub programs, Sequences, Operations with Sequences, Sorting, Series. Operations with Series,Matrices, Operations with Matrices, Packed Programme Usage | | | | | | |
| Work Placement | | N/A | | | | | | |
| Planned Learning Activities and Teaching Methods | | | | Explanation (Presentation), Project Based Study, Individual Study | | | | |
| Name of Lecturer(s) | | Lec. Mustafa TİMUR | | | | | | |

## Assessment Methods and Criteria

| Method | Quantity | Percentage (%) |
|---|---|---|
| Midterm Examination | 1 | 15 |
| Final Examination | 1 | 60 |
| Quiz | 4 | 15 |
| Assignment | 5 | 5 |
| Term Assignment | 1 | 5 |

## Recommended or Required Reading

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|---|---|
| 1 | Algorithms and Data Structures in C++, Alan Parker CRC Press, CRC Press LLC 0849371716 Pub Date: 08/01/93. |
| 2 | Programming with Objects: A Comparative Presentation of Object-Oriented Programming with C++ and Java by Avinash C. Kak ISBN:0471268526 John Wiley & Sons, 2003. |
| 3 | Foundations of C++/CLI The Visual C++ Language for .NET 3.5, Gordon Hogenson, APress,2008. |

| Week | Weekly Detailed Course Contents | |
|---|---|---|
| 1 | Theoretical | Going through the interface of Visual Studio 2008 and writing simple programs. |
| 2 | Theoretical | C Language: main sections of C programming, |
| 3 | Theoretical | Variables and constants |
| 4 | Theoretical | Expressions and operators |
| 5 | Theoretical | Functions, basic program flow control, basic input and output functions |
| 6 | Theoretical | Arrays, pointers, characters and strings, structures, variable scope, advanced program control |
| 7 | Intermediate Exam | Midterm Exam |
| 8 | Theoretical | C++ Language: classes, arrays, pointers |
| 9 | Theoretical | Function overloading, |
| 10 | Theoretical | Inheritance, C++ I/O virtual functions |
| 11 | Theoretical | Templates and error checking |
| 12 | Theoretical | Run time type cast operators, namespaces, applications. |
| 13 | Theoretical | Applications |
| 14 | Theoretical | Applications |
| 15 | Theoretical | Applications |
| 16 | Final Exam | Final Exam |

## Workload Calculation

| Activity | Quantity | Preparation | Duration | Total Workload |
|---|---|---|---|---|
| Lecture - Theory | 16 | 2 | 4 | 96 |
| Assignment | 5 | 0 | 3 | 15 |
| Term Project | 1 | 15 | 10 | 25 |
| Quiz | 4 | 4 | 1 | 20 |
| Midterm Examination | 1 | 15 | 2 | 17 |

| Final Examination | 1 | 20 | 2 | 22 |
|---|---|---|---|---|
| | | | Total Workload (Hours) | 195 |
| | | | [Total Workload (Hours) / 25*] = **ECTS** | 8 |

*\*25 hour workload is accepted as 1 ECTS*

## Learning Outcomes

| 1 | To be able to recognize character-based computer program (C + +, Pascal, ...), in general |
|---|---|
| 2 | To be able to learn the commands and operations. |
| 3 | To be able to learn variable and variable types. |
| 4 | To be able to examine and learn the structures of the block. |
| 5 | To be able to solve block structure problems |

## Programme Outcomes *(Mechanical Engineering (English) Master)*

| 1 | To be able to access wide and deep information with scientific researches in the field of Engineering, evaluate, interpret and implement the knowledge gained in his/her field of study |
|---|---|
| 2 | To be able to complete and implement "limited or incomplete data" by using the scientific methods |
| 3 | To be able to consolidate engineering problems, develop proper method(s) to solve and apply the innovative solutions to them |
| 4 | To be able to develop new and original ideas and method(s), to develop new innovative solutions at design of system, component or process |
| 5 | To be able to gain comprehensive information on modern techniques, methods and their borders which are being applied to engineering |
| 6 | To be able to design and apply analytical, modeling and experimental based research, analyze and interpret the faced complex issues during the design and apply process |
| 7 | To be able to gain high level ability to define the required information and data |
| 8 | To be able to work in multi-disciplinary teams and to take responsibility to define approaches for complex situations |
| 9 | To be able to transfer of the process and results of studies at national and international environments systematic and clear verbal or written |
| 10 | To be able to be aware of social, scientific and ethical values guarding adequacy at all professional activities and at the stage of data collection, interpretation, and announcement |
| 11 | To be able to become aware of new and developing application of profession and ability to analyze and study on those applications |
| 12 | To be able to interpret engineering application's social and environmental dimensions and it's compliance with the social environment |

## Contribution of Learning Outcomes to Programme Outcomes *1:Very Low, 2:Low, 3:Medium, 4:High, 5:Very High*

| | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|
| P1 | 3 | 4 | 5 | 3 | 4 |
| P2 | 3 | 4 | 5 | 3 | 4 |
| P3 | 3 | 4 | 5 | 3 | 3 |
| P4 | 3 | 4 | 5 | 3 | 4 |
| P5 | 3 | 4 | 5 | 3 | 5 |
| P6 | 3 | 4 | 5 | 3 | 4 |
| P7 | 3 | 4 | 5 | 3 | 4 |
| P8 | 3 | 4 | 5 | 3 | 3 |
| P9 | 3 | 4 | 5 | 3 | 4 |
| P10 | 3 | 4 | 5 | 3 | 5 |
| P11 | 3 | 4 | 5 | 3 | 4 |
| P12 | 3 | 4 | 5 | 3 | 3 |