[

{

"code": "CMPE 113",

"name": "Fundamentals of Programming I",

"department": "Department of Computer Engineering",

"credit": 5,

"lecturer": "Parisa Akar, Elif Kurtaran Özbudak",

"description": "Introduction to programming, problem-solving, and algorithms using a high-level programming language.",

"pre-requisite": "test-course"

},

{

"code": "CMPE 114",

"name": "Fundamentals of Programming II",

"department": "Department of Computer Engineering",

"credit": 6,

"lecturer": "Eren Ulu",

"description": "Continuation of programming fundamentals with an emphasis on object-oriented programming.",

"pre-requisite": "CMPE 113, test-course"

},

{

"code": "CMPE 201",

"name": "Discrete Structures of Mathematics",

"department": "Department of Computer Engineering",

"credit": 6,

"lecturer": "Niyazi Anıl Gezer, Anıl Özdemir, Bengisen Pekmen",

"description": "Introduction to mathematical logic, set theory, combinatorics, and graph theory for computer science.",

"pre-requisite": "test-course"

},

{

"code": "CMPE 211",

"name": "Digital Systems",

"department": "Department of Computer Engineering",

"credit": 6,

"lecturer": "Eren Ulu",

"description": "Fundamentals of digital logic design, combinational circuits, and sequential circuits.",

"pre-requisite": "test-course"

},

{

"code": "CMPE 223",

"name": "Data Structures and Algorithms I",

"department": "Department of Computer Engineering",

"credit": 6,

"lecturer": "Ulaş Güleç",

"description": "Introduction to data structures such as arrays, linked lists, stacks, and queues.",

"pre-requisite": "CMPE 114, test-course"

},

{

"code": "CMPE 224",

"name": "Data Structures and Algorithms II",

"department": "Department of Computer Engineering",

"credit": 6,

"lecturer": "Venera Adanova, Tolga Kurtuluş Çapın",

"description": "Advanced data structures and algorithms, including trees, graphs, and sorting algorithms.",

"pre-requisite": "CMPE 223, test-course"

},

{

"code": "CMPE 232",

"name": "Database Systems",

"department": "Department of Computer Engineering",

"credit": 5,

"lecturer": "Ayşe Yasemin Seydim, Deniz Cantürk",

"description": "Fundamentals of database design, relational models, and SQL programming.",

"pre-requisite": "test-course"

},

{

"code": "CMPE 316",

"name": "Game Programming",

"department": "Department of Computer Engineering",

"credit": 5,

"lecturer": "Çağatay Ündeğer",

"description": "Introduction to game development principles, graphics, and physics programming.",

"pre-requisite": "test-course"

},

{

"code": "CMPE 322",

"name": "Theory of Computation",

"department": "Department of Computer Engineering",

"credit": 6,

"lecturer": "Fırat Akba, Özlem Albayrak",

"description": "Study of formal languages, automata theory, and Turing machines.",

"pre-requisite": "CMPE 201, test-course"

},

{

"code": "CMPE 325",

"name": "Information Security and Cryptography",

"department": "Department of Computer Engineering",

"credit": 5,

"lecturer": "Elif Kurtaran Özbudak",

"description": "Introduction to cryptographic principles and techniques for secure communication.",

"pre-requisite": "test-course"

},

{

"code": "CMPE 343",

"name": "Object-Oriented Programming",

"department": "Department of Computer Engineering",

"credit": 6,

"lecturer": "Tolga Kurtuluş Çapın",

"description": "Study of object-oriented principles and design patterns in software development.",

"pre-requisite": "CMPE 114, test-course"

},

{

"code": "CMPE 350",

"name": "Software Engineering",

"department": "Department of Computer Engineering",

"credit": 5,

"lecturer": "İsmail Hakkı Toroslu",

"description": "Introduction to software development processes, requirements analysis, and testing.",

"pre-requisite": "test-course"

},

{

"code": "CMPE 352",

"name": "Operating Systems",

"department": "Department of Computer Engineering",

"credit": 5,

"lecturer": "Eren Ulu",

"description": "Concepts of operating systems including processes, threads, and memory management.",

"pre-requisite": "CMPE 224, test-course"

},

{

"code": "CMPE 353",

"name": "Computer Networks",

"department": "Department of Computer Engineering",

"credit": 5,

"lecturer": "Fırat Akba",

"description": "Study of network architectures, protocols, and data communication techniques.",

"pre-requisite": "CMPE 352, test-course"

},

{

"code": "CMPE 362",

"name": "Artificial Intelligence",

"department": "Department of Computer Engineering",

"credit": 5,

"lecturer": "Cemal Yılmaz",

"description": "Introduction to AI concepts, search algorithms, and basic machine learning techniques.",

"pre-requisite": "test-course"

},

{

"code": "CMPE 363",

"name": "Machine Learning",

"department": "Department of Computer Engineering",

"credit": 5,

"lecturer": "Güven Çatak",

"description": "Introduction to supervised, unsupervised, and reinforcement learning methods.",

"pre-requisite": "CMPE 362, test-course"

},

{

"code": "CMPE 372",

"name": "Human-Computer Interaction",

"department": "Department of Computer Engineering",

"credit": 5,

"lecturer": "Seçkin Yılmaz",

"description": "Principles and methods of designing user-centered interfaces.",

"pre-requisite": "test-course"

},

{

"code": "CMPE 383",

"name": "Introduction to Robotics",

"department": "Department of Computer Engineering",

"credit": 5,

"lecturer": "Eren Ulu",

"description": "Fundamentals of robotics, sensors, and actuators.",

"pre-requisite": "test-course"

},

{

"code": "CMPE 384",

"name": "Embedded Systems",

"department": "Department of Computer Engineering",

"credit": 5,

"lecturer": "Hüseyin Karabulut",

"description": "Design and implementation of software for embedded hardware platforms.",

"pre-requisite": "test-course"

},

{

"code": "CMPE 410",

"name": "Mobile Application Development",

"department": "Department of Computer Engineering",

"credit": 5,

"lecturer": "Çağatay Ündeğer",

"description": "Development of mobile applications for Android and iOS platforms.",

"pre-requisite": "test-course"

},

{

"code": "CMPE 420",

"name": "Parallel Computing",

"department": "Department of Computer Engineering",

"credit": 5,

"lecturer": "Niyazi Anıl Gezer",

"description": "Study of parallel computing architectures and parallel programming models.",

"pre-requisite": "test-course"

},

{

"code": "CMPE 425",

"name": "Cryptography",

"department": "Department of Computer Engineering",

"credit": 5,

"lecturer": "Elif Kurtaran Özbudak",

"description": "Advanced study of cryptographic systems and security protocols.",

"pre-requisite": "CMPE 325, test-course"

},

{

"code": "CMPE 433",

"name": "Cloud Computing",

"department": "Department of Computer Engineering",

"credit": 5,

"lecturer": "Venera Adanova",

"description": "Introduction to cloud computing concepts, architectures, and services.",

"pre-requisite": "test-course"

},

{

"code": "CMPE 435",

"name": "Big Data Analytics",

"department": "Department of Computer Engineering",

"credit": 5,

"lecturer": "Deniz Cantürk",

"description": "Techniques for processing, analyzing, and visualizing large datasets.",

"pre-requisite": "test-course"

},

{

"code": "CMPE 450",

"name": "Software Project Management",

"department": "Department of Computer Engineering",

"credit": 5,

"lecturer": "İsmail Hakkı Toroslu",

"description": "Study of project management principles and practices in software development.",

"pre-requisite": "test-course"

}

]