

TEMPLATE FOR COURSE SPECIFICATION

HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW

COURSE SPECIFICATION

This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification.

| | |
|--|---|
| 1. Teaching Institution | University of Anbar |
| 2. University Department/Centre | College of Computer Science and Information Technology – Computer Science Department |
| 3. Course title/code | Logic Design 2 |
| 4. Programme(s) to which it contributes | Bachelors of Information System |
| 5. Modes of Attendance offered | Electronic attendance |
| 6. Semester/Year | Second semester 2021-2022 |
| 7. Number of hours tuition (total) | 48 |
| 8. Date of production/revision of this specification | 2021/09/20 |
| 9. Aims of the Course | |
| | <ul style="list-style-type: none">• The student should understand encoder , decoder and multiplexers• The student should understand synchronous logic circuit• The student should understand flip-flops and how to use them• The student should understand registers and their types• The student should understand counters and their types• The student should understand ROM and PLA implementation |
| | |
| | |

10· Learning Outcomes, Teaching ,Learning and Assessment Methode

A- Knowledge and Understanding

- A1. The student should understand encoder, decoder and multiplexers
- A2. The student should understand flip-flops and how to use them.
- A3. The student should understand registers and their types.
- A4. The student should understand counters and their types.
- A5. The student should understand ROM and PLA implementation.

B. Subject-specific skills

- B1.
- B2.
- B3.

Teaching and Learning Methods

- The student should use utilities in the lab to apply scientific experiment
- The ability to design a logic circuit.

Assessment methods

| Notes | Date | % | Assessment | |
|-------|---------------------------|------|----------------------|---|
| | 6 th week | 10% | First Month exam | 1 |
| | 10 th week | 10% | Second Month exam | 2 |
| | 16 th week | 10% | Third Month exam | 3 |
| | All weeks | 5% | Attendance and HW | 4 |
| | At end of each experiment | 15% | Reports and Lab exam | 5 |
| | End of semester | 50% | Final exam | 6 |
| | | 100% | Sum | |

C. Thinking Skills

- C1.
- C2.
- C3.
- C4.

Teaching and Learning Methods

Assessment methods

D. General and Transferable Skills (other skills relevant to employability and personal development)

- D1.
- D2.
- D3.
- D4.

11. Course Structure

| Week | Hours | ILOs | Unit/Module or Topic Title | Teaching Method | Assessment Method |
|------|---------------------------|------|--------------------------------|-----------------|-------------------|
| 1 | 2 Theory + 2 Practical | | Synchronous logic gates | | |
| 2 | 2 Theory + 2 Practical | | Adder and subtractor circuits | | |
| 3 | 2 Theory + 2 Practical | | Comparator circuits | | |
| 4 | 2 Theory + 2 Practical | | Encoders and multiplexers | | |
| 5 | 2 Theory + 2 Practical | | Multiplexers | | |
| 6 | 2 Theory + 2 Practical | | First month exam | | |
| 7 | 2 Theory + 2 Practical | | Flip-flops | | |
| 8 | 2 Theory + 2 Practical | | SR flip flop and j k flip flop | | |
| 9 | 2 Theory + 2 Practical | | T flip flop and D flip flop | | |
| 10 | 2 Theory + 2 Practical | | Second month exam | | |
| 11 | 2 Theory + 2 Practical | | Registers design | | |
| 12 | 2 Theory + 2 Practical | | Counters design | | |
| 13 | 2 Theory + 2 Practical | | ROM | | |
| 14 | 2 Theory + 2 Practical | | PLA | | |
| 15 | 2 Theory + 2 Practical | | State plan | | |
| 16 | 2 Theory + | | Final exam | | |

| | | | | | |
|---|-------------|---|--|--|--|
| | 2 Practical | | | | |
| 12. Infrastructure | | | | | |
| Required reading: | | <ul style="list-style-type: none"> - Lectures - Home works - Case study in the Lab - Weekly reports | | | |
| <ul style="list-style-type: none"> · CORE TEXTS · COURSE MATERIALS · OTHER | | | | | |
| Special requirements (include for example workshops, periodicals, IT software, websites) | | <ul style="list-style-type: none"> - “Digital Design” 4th Edition by M. Morris Mano and Michael D. Ciletti - Fundamentals of logic design by J. Roth | | | |
| Community-based facilities (include for example, guest Lectures , internship , field studies) | | | | | |

| | |
|----------------------------|---|
| 13. Admissions | |
| Pre-requisites | Fundamental of English and Mathematics and Logic design 1 course. |
| Minimum number of students | 25 |
| Maximum number of students | 40 |

Dr. Muntaser A. Salman

