



WALCHAND COLLEGE OF ENGINEERING SANGLI
(Government Aided Autonomous Institute)



One Credit
VALUE ADDED COURSE

On

Basic Programming Skills with "C"

(Approved under Center for Continuing Education)

From

26th February 2022 to 16th April 2022



Course Co-coordinators

Ms. P. D. Mundada
Assistant Professor

Mr. K. P. Kamble
Assistant Professor

Dr. P. H. Sawant
Director

Dr.S.B.Joshi
CCE Coordinator

Dr.M.A.Shah
HOD, Department of CSE

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ABOUT WALCHAND COLLEGE OF ENGINEERING

Walchand College of Engineering Sangli (WCE), established in 1947 and aided by the Govt. of Maharashtra, is one of the oldest and premier engineering institutions in India. With a rich history of over 70 years and a beautiful campus of over 90-acres, WCE Sangli, is providing transformational learning experience in various disciplines of engineering.

WCE offers 6 UG programs in Civil, Electrical, Mechanical, Electronics, Computer Science and Engineering and Information Technology and 10 PG programs. It also offers PhD programs under Shivaji University, National Doctoral Fellowship of AICTE and under Quality Improvement Program (QIP) scheme of Ministry of Human Resource Development (MHRD). At present, around 1900 students are studying in various B.Tech programs, 480 students in M.Tech programs and around 75 scholars are pursuing their PhD programs. Walchand College of Engineering is affiliated to Shivaji University Kolhapur and is approved by AICTE, New Delhi. The institute is also given autonomous status by University Grants Commission since 2007.

The students of WCE get placed in reputed Multinational and Indian Companies such as Google, Microsoft, LinkedIn, Amazon, John Deere, Rakuten, P&G, Mahindra, TCS, Infosys and many other companies. With a high percentage of placements, WCE students also get very good packages, with the highest package being 43 LPA in the year 2019.

Through the Transformational Teaching Learning (TTL) processes, WCE aims at overall development of students with focus on Education, Employability and Employment. The Track Based Curriculum and Choice Based Credit System along with Value Added Professional and Life Skill Courses at WCE, enable students to choose appropriate path of their career.

ABOUT COMPUTER SCIENCE AND ENGINEERING DEPARTMENT

The CSE department of WCE has been established in the year 1986 with the introduction of Undergraduate Programme in Computer Science and Engineering. The UG and PG programmes of the department are affiliated to Shivaji University, Kolhapur and use the academic autonomy for the overall development of students with focus on Education, Employability and Employment. The Ph.D. Programme in the department which runs under AICTE's QIP has boosted the research culture further. The department also provides research guidance to Ph.D. students of Shivaji University, Kolhapur. Many researchers have completed their Ph.D. research work at the department. The strong research culture, fully equipped computing facility and well qualified faculty and staff are the key highlights of the department.

COURSE OBJECTIVES

- i. To imbibe an understanding of programming.
- ii. To develop problem-solving skills to translate text described problems into programs written using the Programming language with the help of language constructs.
- iii. To impart knowledge on general principles of computer languages such as: conditional branching, loops, block structures, functions, and input/output

COURSE OUTCOMES

- i. Paraphrase the basics of programming
- ii. Convert the algorithms to programs
- iii. Apply programming language principles and constructs to solve problems

FACULTY/ SPEAKERS

Sr. No.	Name	Organisation	Email
1	Ms. P. D. Mundada	WCE, Sangli Assistant Professor	pooja.mundada@walchandsangli.ac.in
2	Mr. K. P. Kamble	WCE, Sangli Assistant Professor	kiran.kamble@walchandsangli.ac.in

COURSE SCHEDULE

Date: 26th February 2022 to 16th April 2022

Sr. No.	Content	Hours	Date and Time
1.	Introduction to Programming: Introduction to components of a computer system Idea of Algorithm: steps to solve logical and numerical problems.	1	26/2/2022
2.	Introduction to Programming: Representation of Algorithm: Flowchart/Pseudocode with examples.	1	26/2/2022
3.	Introduction to Programming: From algorithms to programming Language: source code, variables (with data types) Syntax and Logical Errors in compilation, object and executable code.	1	5/3/2022
4.	Arithmetic expressions, Conditional Branching & Loops: Arithmetic, relational and logical operators, increment and decrement operators	1	5/3/2022
5.	Arithmetic expressions, Conditional Branching & Loops: Conditional operator, bit-wise operators, assignment operators, expressions, type conversions, conditional expressions, precedence and order of evaluation	1	12/3/2022
6.	Arithmetic expressions, Conditional Branching & Loops: Conditional Branching & Loops: Statements and blocks, if and switch statements, Loops, while, do-while and for statements, break, continue.	1	12/3/2022
7.	Arrays- concepts, declaration, definition, accessing elements, storing elements	1	19/3/2022
8.	Arrays: arrays and functions, two-dimensional arrays.	1	19/3/2022
9	Arrays: Character arrays, Strings, and applications of arrays.	1	26/3/2022
10	Functions and recursion: Designing structured programs, Functions basics, parameter passing.	1	26/3/2022

11	Functions and recursion: Call by value, idea of call by reference, storage classes like extern, auto, register, static, scope rules	1	2/4/2022
12	Functions and recursion: Block structure, user defined functions, Recursion with examples.	1	2/4/2022
13	Pointers: Concepts, initialization of pointer variables, pointers and function arguments	1	9/4/2022
14	Pointers: Address arithmetic, Character pointers and functions, pointer to pointer.	1	9/4/2022
15	Structures: Declaration, definition and initialization of structures, accessing structures.	1	16/4/2022
16	Structures: Nested structures, arrays of structures, structures and functions, pointers to structures, self-referential structures	1	16/4/2022
Total		16	

COURSE CONTENT

Module No	Contents	No. of Sessions	Assigned to
1	Introduction to programming: Introduction to components of a computer system Idea of Algorithm: steps to solve logical and numerical problems. Representation of Algorithm: Flowchart/Pseudocode with examples. From algorithms to programming Language: source code, variables (with data types), Syntax and Logical Errors in compilation, object and executable code.	3	Ms P D Mundada
2	Arithmetic expressions: Arithmetic, relational and logical operators, increment and decrement operators, conditional operator, bit-wise operators, assignment operators, expressions, type conversions, conditional expressions, precedence and order of evaluation Conditional Branching & Loops: Statements and blocks, if and switch statements, Loops ,while, do-while and for statements, break, continue.	3	Ms P D Mundada
3	Arrays Arrays- concepts, declaration, definition, accessing elements, storing elements, arrays and functions, two-dimensional arrays, Character arrays, Strings, and applications of arrays.	3	Ms P D Mundada, Mr K P Kamble
4	Functions and Recursion Designing structured programs, Functions basics, parameter passing, call by value, idea of call by reference, storage classes like extern, auto, register, static, scope rules, block structure, user defined functions, Recursion with examples.	3	Mr K P Kamble
5	Pointers Pointers- concepts, initialization of pointer variables, pointers and function arguments, address arithmetic, Character pointers and functions, pointer to pointer.	2	Mr K P Kamble
6	Structures- declaration, definition and initialization of structures, accessing structures, nested structures, arrays of structures, structures and functions, pointers to structures, self-referential structures	2	Mr K P Kamble

EXAMINATION SCHEME WITH SCHEDULE

There will be three examinations (Test 1/ LA1, Test 2/ LA2 and End Exam)

Mode of examination will be Online

Type of Course	Exam Name	Marks	Duration	Date	Time
Theory	Test-1 (T1)	20	1 Hour	8/3/2022	10.00am to 11.00 am
	Test-2 (T2)	20	1 Hour	22/3/2022	10.00am to 11.00 am
	End Exam	60	2.5 Hour	18/4/2022	10.00am to 12.30 pm

CERTIFICATE

Certificate will be issued to the participants, after successful completion of the course for WCE students, the credits and grades of this Value Added Course shall be mentioned on their grade card for which, the student should submit the certificate to Examination Section. These credits shall not be considered for SGPA / CGPA calculation.

BUDGET

- Self-Financed
- Mode of Payment: Online
- Max no. of students allowed 200
- Min no of students necessary 20

Course Fees: For WCE student Rs.1000 and outside WCE, student Rs.1000 including Exam fees of Rs.300

VENUE FOR CLASS

Online Mode: Lectures will be conducted in online mode through Google meet, Microsoft teams etc.

FEE COLLECTION

Course fees (including exam fees) will be collected through online mode of payment.

Payment of fees: Use Google Pay/Phone Pay/ Net banking for online payment of Fees

Account details:

Name of Bank	Bank of India
Branch	Vishrambagh, Sangli
A/C No.	150710110000187
IFSC	BKID0001507
MICR	416013154

Enquiries:

1. Ms. P. D. Mundada

Email: pooja.mundada@walchandsangli.ac.in

2. Mr. K. P. Kamble

Email: kiran.kamble@walchandsangli.ac.in

Website link (for more details): <http://wce-valueadded.herokuapp.com/>

Note: Detailed course schedule will be displayed later on website.